2023 **MISSOURI NURSING** WORKFORCE REPORT

MISSOURI
State Board of Nursing

Center for Health Policy
University of Missouri

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Executive Summary

The Missouri State Board of Nursing (MSBN) and the University of Missouri Center for Health Policy (CHP) annually report on the characteristics of the Missouri Nursing workforce and provide data-driven recommendations for stakeholders and policymakers on workforce development, addressing access in health professional shortage areas, and recruitment and retention efforts to enhance sustainability.

This collaboration fosters impactful relationships with established expert partners and reliable data with sound collection and analysis practices resulting in an objective and accurate view of the workforce. The CHP explores the workforce data to understand the workforce characteristics and perspectives and provides findings to assist policymakers in legislative and administrative decisions toward better outcomes for the nursing workforce, their colleagues, and the patients they serve.

The *2023 Missouri Nursing Workforce Report* presents an analysis of data provided by the MSBN, Division of Professional Registration (Board of Nursing (mo.gov)), and National Council of State Board of Nursing (NCSBN) national database Nursys® (Nursys Overview | NCSBN).

The report focuses on the Missouri Nursing workforce's demographic characteristics, geographic distribution, educational characteristics, and employment settings by license type in addition to profiling specific nursing roles including nursing faculty, certified nurse midwives, public health nursing, maternal-child health nurses, and school nurses.

Pursuant to section 324.001.14(4), RSMo, all licensee/registrant data or records provided by the MSBN shall be deemed the property of the MSBN.

Accordingly, this report and all data contained herein are the property of the MSBN and shall be referenced when used by the following:

The University of Missouri Columbia Center for Health Policy and Missouri State Board of Nursing. (2023). *2023 Missouri Nursing Workforce Report*. Publications | Missouri Health Care Workforce Project (mohealthcareworkforce.org)

Highlights from the Analysis

Each nursing license type is defined by Missouri Revisor of Statutes - Revised Statutes of Missouri, RSMo Section 335.016

Licensed Practical Nurse (LPN):
- LPNs comprised 15% (n = 20,796) of the total Missouri nursing workforce (N = 134,599).
- The majority of the LPN workforce was employed in inpatient employment settings (47.7%). Within the inpatient setting, the LPN workforce was mostly working in nursing homes/extended care settings (29.5%) and most of the positions held were in the geriatric/gerontology nursing scope of practice (33.6%) compared to approximately 10% of LPNs working in hospital settings.
- Most LPNs reported holding one position (88.3%) as a staff nurse (77.8%) with the average workweek ranging from 36 to 40 hours (66.2%).

- LPNs had a higher representation in micropolitan areas (17.7%) and rural areas (13.7%), as compared to the RN and APRN workforce, with most of the LPNs, 68.6%, distributed within metropolitan counties.
- An examination of LPN workforce employment trends over time reveals a notable decrease (9.7%) from 2018 to 2023 in LPNs working in administrative and education employment type settings, decreasing from 2018 (48.3%) to 2022 (38.6%).
- LPNs experienced a slight decrease (3.7%) in outpatient employment-type settings from 2018 (14.7%) to 2022 (18.4%).
- LPNs also experienced a notable increase (6.4%) in inpatient employment settings between 2018 (32.4%) to 2022 (38.8%).

Registered Nurse (RN):
- RNs comprised 75% of the total Missouri Nursing workforce, representing the majority of the licensed and practicing nursing workforce comparatively (n = 100,372) of the total workforce (N = 134,599).
- RNs demonstrated low employment rates in outpatient ambulatory care employment settings (6.2%). The greater part of the RN workforce practiced in hospital inpatient settings (61.9%) providing care in acute care critical care (14.8%) and medical-surgical (11.7%) nursing capacities but not at a significantly higher rate as compared to the other employment positions.
- Most RNs reported working in one position (91.6%) as a staff nurse (73%) with the average workweek ranging from 36 to 40 hours a week (70%).
- Most RNs (86.8%) worked in metropolitan counties, 7.9% in micropolitan counties, and 5.3% in rural counties.
- An examination of RN workforce employment trends over time revealed the RN workforce experienced a slight increase in the distribution across inpatient employment settings (1.2%) from 2019 (53.3%) to 2021 (54.5%), which could have affected the slight decrease in outpatient employment settings from 2019 (11.9%) to 2021 (11.1%) and in administrative employment settings from 2019 (32.4%) to 2021 (32.0%).

Advanced Practice Nurses (APRNs):
- Missouri has four APRN nurse roles: Certified Clinical Nurse Specialist (CNS), Certified Nurse Practitioner (CNP), Certified Nurse Midwife (CNM), and Certified Registered Nurse Anesthetist (CRNA).
- Based on the number of APRN individuals, and not the number of licenses, APRNs comprised 10% (n = 13,431) of the total Missouri Nursing workforce (N = 134,599).
- Based on the number of APRN licenses, APRN licenses comprise almost 11% of the total Missouri Nursing Workforce.
- The APRN workforce by number of APRN licenses:
  - CNP- 82.0% (n = 12,105)
  - CRNA -15.2% (n = 2,252)
  - CNS -1.6% (n = 236)
  - CNM -1.2% (n = 177)
- APRNs most often practiced in inpatient employment settings (51.0%) and the greater part of the workforce in hospital settings (48.6%) providing care in acute care/critical care

(11.1%), anesthesia (15.0%) or family health (12.4%) capacity titled as an advanced practice nurse (72.2%) or staff nurse (21.4%).

- Most APRNs reported working in one position (83.0%) with the average workweek ranging from 36-40 hours (59.1%).
- Most APRNs worked (86.3%) in metropolitan counties, while 8.4% worked in micropolitan counties, and 5.3% in rural counties.
- An examination of APRN workforce employment trends over time revealed a slightly decreased distribution across inpatient employment settings (4.3%) from 2019 (74.1%) to 2021 (70.4%).
- APRNs experienced a slight decrease in outpatient employment settings from 8.8% in 2019 to 8.6% in 2021 to 7.2% in 2023.
- APRNs experienced an increase in administrative employment settings (3.8%) from 2019 (17.0%) to 2021 (20.8%).

Introduction

The Missouri Health Care Workforce Project (MHCWP), housed at the University of Missouri Center for Health Policy, conducts analyses of Missouri's health care workforce supporting policymakers in health care, government, and training programs, to improve access and quality of health services for all Missourians. Appropriate planning and assessment of health professional needs depends on accurate, timely, and reliable data.

MHCWP serves as a data warehouse and analytic clearinghouse, providing stakeholders the information necessary to address the shortages and access challenges of health care professionals, and is used for planning by policymakers, health systems, researchers, and higher education institutions to determine the supply and demand of health professionals statewide.

The mission of the Center for Health Policy (CHP) includes promoting the well-being and access to equitable healthcare for all Missourians, particularly those with the greatest need. The Missouri Health Care Workforce Project collects, analyzes, and reports data on Missouri's health care workforce. Publications and data enable stakeholders to make data-driven decisions and advocate for a robust health care workforce.

The goals of the Missouri Health Care Workforce Project (HCWP) include:

- Monitor longitudinal trends in the supply and distribution of health care professionals,
- Inform health care workforce policymakers and advocacy organizations,
- Inform training programs that will determine the quantity and distribution of health care professionals, and
- Identify emerging health care workforce issues.

The 2023 Missouri Nursing Workforce report explores the workforce patterns and supply of Missouri's nurses. The Missouri Nursing Workforce exemplifies 134,599 unique and verified actively licensed practicing nurses providing nursing services to the 6.1 million Missourians. The data reveals Missouri licensed practicing nurses distributed across employment areas in Missouri.

Examining the characteristics and distribution facilitates a better understanding of the challenges the Missouri nursing workforce experiences and ways to inform policy to support a healthy nursing workforce.

APRN is a broad category of nursing that includes multiple degree types and titles. This report provides demographics of the overall APRN population and then breaks out substantive questions related to workplace participation by Certified Nurse Midwives (CNM), Certified Nurse Practitioners (CNP), Certified Nurse Specialists (CNS), and Certified Registered Nurse Anesthetists (CRNA).

The report utilizes robust and reliable data to develop an analytical and intuitive perception of the nursing workforce's demographic characteristics, geographic distribution, educational backgrounds, specializations, and the populations served.

Summary of Methods

This report resulted from extensive collaboration between the MSBN and the Center for Health Policy (CHP) at the University of Missouri-Columbia.

The data in this report provided by the MSBN, Division of Professional Registration (DPR) (Board of Nursing (mo.gov)), and National Council of State Board of Nursing (NCSBN) national database Nursys® (Nursys Overview | NCSBN) was evaluated to describe the Missouri nursing workforce.

- DPR data included all individual (unique) nurses with an active (non-expired) Missouri license as of October 3, 2023 (N = 140,757).
  - Approximately 20,971 unique nurses hold multiple licenses.
    - DPR data corresponds to 155,570 total licenses, from the 140,757 unique nurses.
      - ➢ To determine the total number of unique nurses, individuals are grouped by last name, first name, gender, birth year, and ethnicity.
      - ➢ Then the row with the most recent license year is selected.
      - ➢ Unless otherwise verified, the most advanced license (highest license type) was selected for reporting purposes.

- The MSBN's raw DPR data encompassed 156,275 entries, including 13,761 duplicate entries.
  - Duplicates typically occur when a nurse has more than one license.
    - For example, a nurse may have an original entry as a RN and another entry as an APRN, after completing additional education and national certification.
  - The duplicate entry with the highest license type was retained, and the remaining duplicate entries were removed from the dataset, resulting in 142,514 unique nurses in the DPR dataset.

- Nursys data included all nurses with an active (non-expired) Missouri license as of October 1, 2023 (N = 155,982).
  - This includes all the MO licenses, which is not indicative of the total number of nurses.
    - Nursys® includes more comprehensive data on nurses enrolled in the Nursys® e-Notify system between January 1, 2020, and October 1, 2023.

- The workforce information collected in Nursys® included education, employment location, setting, and employment status.

- Nursys® data were matched with DPR data to create the merged dataset used throughout this report (N = 134,599).
  - Nursys: 173,890 total licenses, from the 155,982 total unique nurses.
    - To determine the total number of unique nurses, nurses are grouped by last name, first name, birth year, workforce data collection date, and current employment status.
    - Then the row with the highest license number is selected to represent that unique nurse with that license type.

The data used in this report is derived from the Nursys survey data matched to the Professional Registration data verifying the total number of unique nurses actively licensed and practicing in Missouri verified by completing the Nursys survey.

- The merge process includes concatenating the raw DPR data with the raw Nursys data. Then unique nurses are found by grouping by the DPR columns: last name, first name, gender, birth year, and county codes and selecting the row with the most recent license year.
- All analysis is based on this unique merged data set.

  - Nursys: 173,890 total licenses; 25,006 unmatched to DPR.
  - DPR: 155,570 total licenses; 6,615 unmatched to Nursys.
  - Merged Dat Set: 155,570 total licenses; 134,599 total unique nurses.

The Nursys® dataset is a repository of license and disciplinary data maintained by NCSBN, the not-for-profit Nursys.com, and the Nursys® e-Notify service with the participation of boards of nursing to support the mission and work of individual boards of nursing. The MSBN is a member of NCSBN.

- Pursuant to the Nursys® e-Notify terms of use, the NCSBN does not sell information.
- Workforce-related information in the repository is used for nursing workforce research.
- Appendix 1 includes a copy of the Minimum Dataset Survey used to collect workforce information during the renewal process.
- The MSBN sends license and discipline records to Nursys®.
- Nurses renewing their licenses are required to enroll in Nursys e-Notify® and provide workforce information.
- New licensees and those who renew their licenses with a paper form did not have data in Nursys®.

The 2023 Missouri Nursing Workforce Report is presented as a descriptive research study, identifying nursing employment and practice patterns, nursing population demographic characteristics, and the geographic distribution across Missouri. We utilize descriptive statistics to provide detail and context to policymakers who are charged with determining the most productive investment of resources, both public and private, to ensure an adequate workforce to meet the population health needs of Missouri's population.

Measures used in the report include averages ('means'), the most commonly used of the measures of central tendency, which are reported to summarize the distribution by providing the mathematical center point of the data set. However, while commonly used, averages can be influenced by extreme (outlier) values in a data set, risking misrepresentation of the data. Median values present to readers the mid-point value (50%) of a measure, providing context to average values and minimizing the risk of misinterpretation. Typically, the greater the difference between average and median values, the more likely the averages reported are skewed by outlier values. Similarly, we report modes to provide readers with information about the most frequent value to appear in a data set.

As an example of how the use of measures of central tendency works together to enhance the interpretation of the data, it is useful to consider the age distribution of Missouri's nursing population by license type. Both the LPN average and median age were 47 suggesting a normal distribution influenced by fewer or more nurses entering the field at a young age or working past the typical retirement age. Additionally, knowing that the modal age of the LPN workforce is 41, tells us that the Missouri LPN nursing population is clustered in the early mid-career age range. Similarly, the average and median age of the RN workforce are 46 and 45 respectively while the modal age was 38, suggesting the peak of RN workforce participation is slightly younger than for LPNs. Consistent with RNs, the APRN average age was 45.5, the median was 43 years, whereas the modal age was also 38. Policymakers and employers can use this information to inform decisions related to pipeline issues such as recruitment, retention, and professional development.

Using nursing workforce data based on actively licensed Missouri nurses geographic mapping illustrates the distribution of the workforce by age cohorts, gender, and race categories, as well as education and employment patterns at the county level. Consistent features for map presentation were applied as follows:

- Lighter color shading represents lower rates of nurses per 10,000 (10k) population while counties with darker shading represent higher rates.
- A rate of nurses per 10k population was used to normalize population density across counties. Most mapping is not indicative of the total number of nurses per county but the rate per population. Therefore, rates might be different even when there are more nurses in the county if the population is much smaller than that of a county with a larger population and more nurses.
- The county of employment data associated with the maps are referred to in Appendix 2. Appendix 2 demonstrates the number and rate per 10k of Nurses in Metropolitan, Micropolitan, and Rural Counties by County of Employment and Nurse Type. Appendix 2 distinguishes that LPNs and RNs were more frequently employed in metropolitan counties than in micropolitan with the least distribution in rural counties. APRNs represented the majority employed in metro counties than rural counties with the least distributed in micropolitan counties.
- To protect the confidentiality and anonymity of Nursys survey respondents, this report applies a suppression rule for item responses/cross tabulations/mapping with an 'n' of fewer than 10 (n < 10).

- Core-based statistical areas (CBSAs, metropolitan, micropolitan, rural) are geographic areas defined by the U.S. Office of Management and Budget (OMB) as one or more counties anchored by an urban center plus the counties socioeconomically tied to the urban center by commuting.

Due to multiple data sets resulting in n < 10, the BIPOC population demonstrated in Figures 56, 68, 80, 92, 105, 121, 134, and 146 are indicative of the following races: American Indian/Alaskan Native, Asian, Black, American, Native Hawaiian/Other Islander, Another Race, and Two or More Races.

- BIPOC, an acronym describing people in the US, represents Black (describing people of African or Caribbean descent), Indigenous (describing the native inhabitants of North America American Indians or Native Americans, First Nations, Native Alaskans or Alaskan Natives), and People of Color (used as a universal term that describes people who are not White or Caucasian, which represents Black or African, East Asian, Latino/a/x, South Asian, and Hawaiian or other Pacific Islander).

On the Figure 1, Missouri County Reference Map:

- Metropolitan areas: urban centers designated by more than 50,000 residents.
- Micropolitan areas: urban centers designated between 10,000-50,000 residents.
- Counties without a CBSA are defined as rural.

Figure 1. Missouri County Reference Map – Missouri Core-Based Statistical Areas
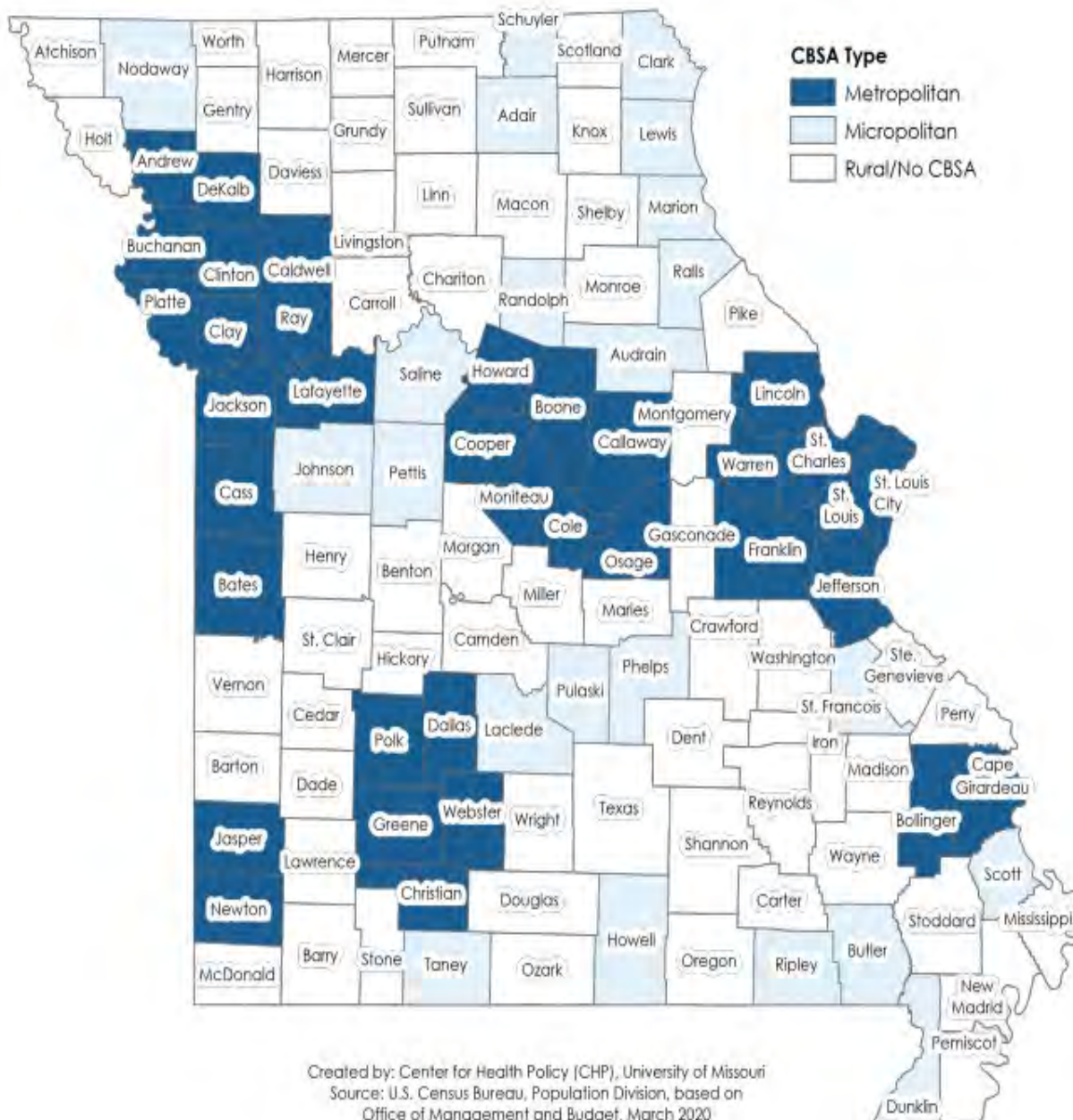
These statistical areas provide nationally uniform delineations for collecting, analyzing, and publishing federal statistics for geographic areas. The two types of CBSAs, metropolitan (metro) and micropolitan (micro) statistical areas, are theoretically comparable but a micro area encompasses a smaller population center.

The U.S. Census Bureau classifies rural counties with expanded approaches using the Metropolitan Statistical Area and Micropolitan Statistical Area classifications. In the metro areas, this includes combining the urban counties with adjacent rural counties integrated with the closest urban population center. The areas designated as micropolitan have smaller city hubs that do not meet the population density requirements for classification as a metropolitan area.

Due to these distinctions, 19 Missouri counties would not typically be classified as urban counties, falling short of the population density requirement to be designated as a metro area and 22 counties in a micro area. This would leave 58 Missouri rural counties that would otherwise be classified as 'Other Rural', due to not meeting either metro or micro area population density requirements resulting in 99 rural Missouri counties. Conversely, the map does not demonstrate the metropolitan-rural or micropolitan-rural areas.

This nursing report utilizes the CBSAs to analyze nursing population trends, without implementing the expanded method of classifying rural counties, which resulted in representing 58 rural counties out of the 115 Missouri counites (which included St. Louis City).

Licensed Practical Nurse (LPN)

LPNs comprised a relatively small portion of the nursing population, representing 15% of the Missouri Nursing workforce (20,796 LPNs of the 134,599 total nursing workforce). Most LPNs reported providing nursing services in inpatient care employment settings (47.7%) in metropolitan counties. However, in less population-dense areas, LPN employment rates were higher in nursing homes and extended care facilities.

LPN Demographic Characteristics

LPNs primarily represented nurses who identified as white (79.1%) females (93.2%) ages 35-44 (23.8%) and 45-54 (22.0%).

LPN Age Characteristics

The average age (mean) was 47, the median age was 47, and the most frequently occurring age (modal age) was 41. The LPN workforce most frequently consisted of those between the ages of 35 – 54 with more LPNs nearing retirement ages 55-64 (18.8%) compared to those entering LPN nursing 17-24 (17.7%).

Figure 2. LPN Age Distribution

LPN (N = 22,327)	17-24	25-34	35-44	45-54	55-64	65+
	3.8%	17.7%	23.8%	22.0%	18.8%	13.9%
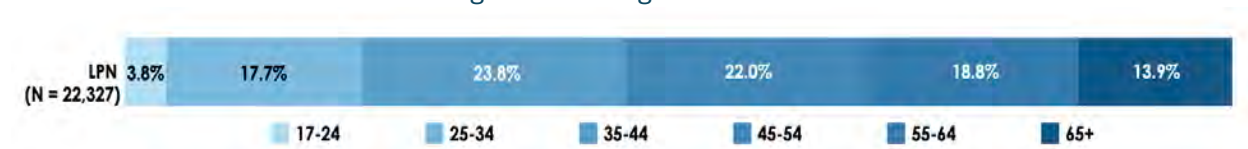
LPN Gender Characteristics

Figure 3. LPN Gender Distribution

6.8%
(n = 1,501)

93.2%
(n = 20,681)

LPN
(N = 22,182)

■ Female
■ Male
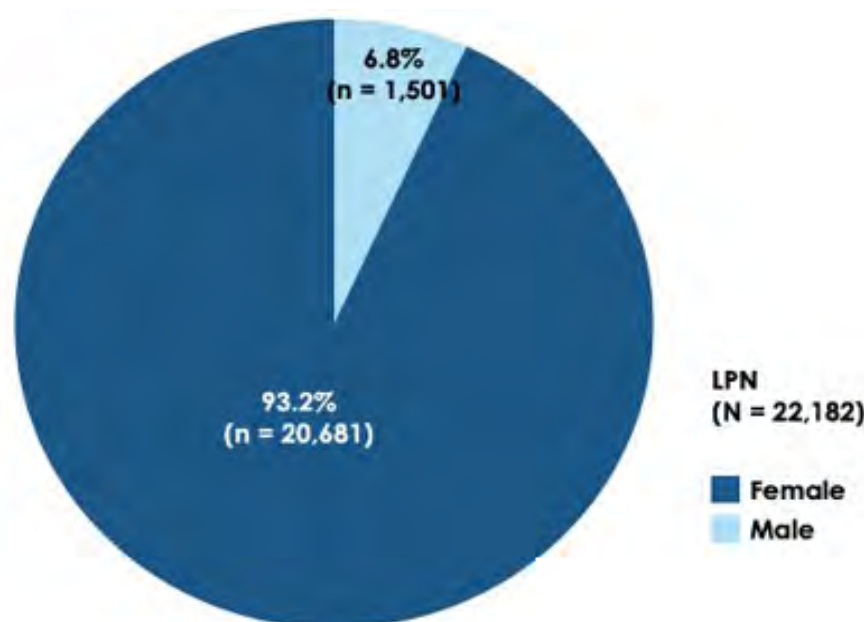
* To protect privacy, data on those identified as non-binary and those who did not answer the question (n = 138) were not included in the analysis.

LPN Race and Ethnicity Characteristics

The Nursys® survey uses race and ethnicity categories consistent with the 2020 U.S. decennial census, which allows respondents to report multiple races and reports ethnicity as a separate category from race.

The Missouri LPN workforce, mostly women, differs from the state's overall race and ethnicity profile in a few notable ways. Approximately 15% of LPNs identified their race as 'Black' compared to 11% of all Missourians, and while about 5% of Missourians identified ethnicity as 'Hispanic or Latino' of any race, only 2% of the LPN workforce identified their ethnicity as such.

Figure 4. LPNs by Race and Ethnicity
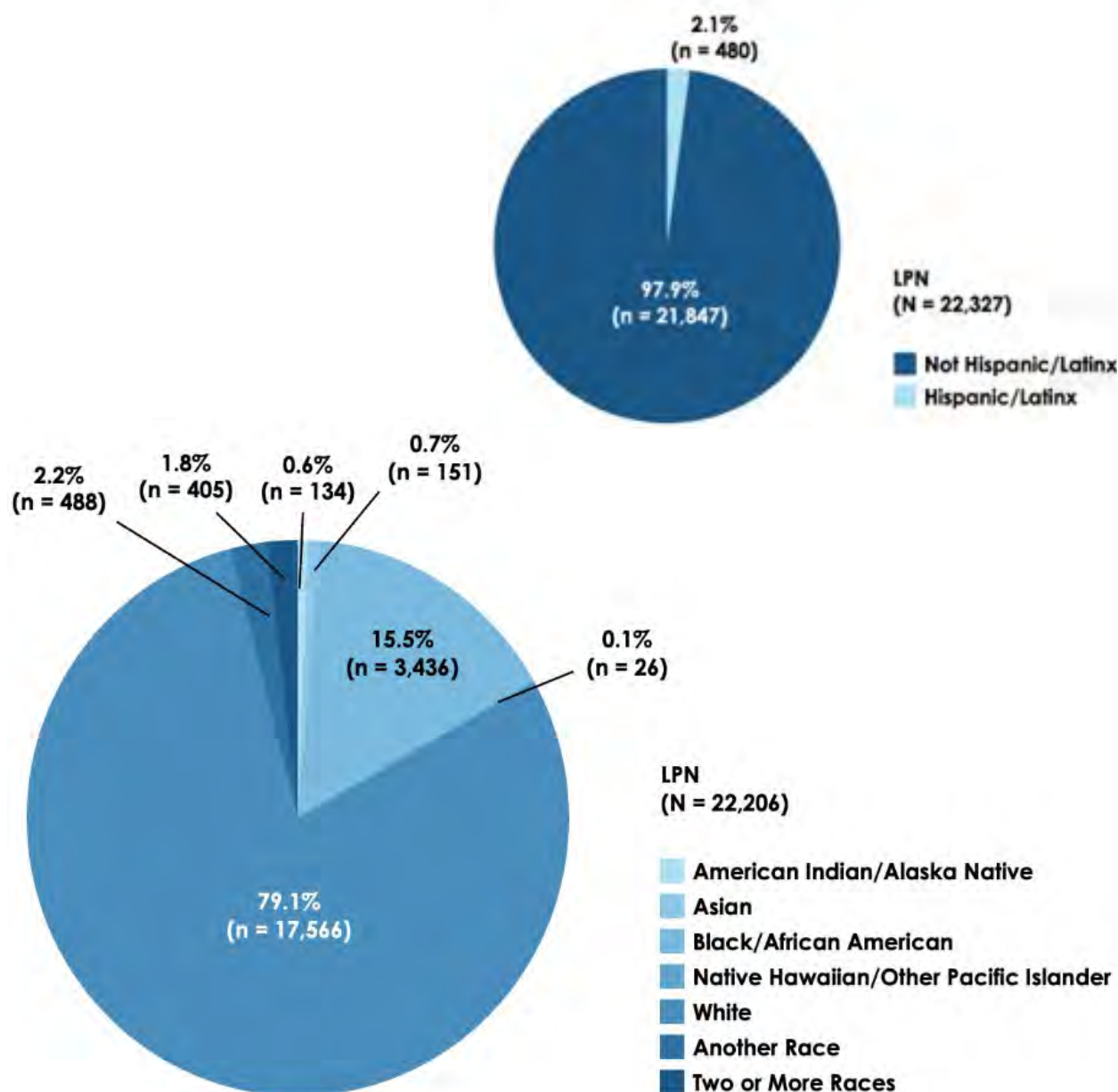
*Figure 4 does not include LPNs who did not indicate a race (N = 121).

LPN Nurses by Employment County and Employment Setting

Understanding the age distribution of LPNs in different employment settings provides valuable insights for policymakers, healthcare, and public health providers. This information can help allocate resources and make informed decisions about training, professional development, and recruitment strategies tailored to the specific needs of each employment setting.

Analysis of the 2023 Nursys survey data revealed that while LPNs age 55 and older comprised about 33% of the LPN workforce, there were four employment settings in which they made up 35% or more of LPNs. These settings included dialysis centers (36.1%), home health providers (37.1%), school of nursing programs (40%), and occupational health providers (45%).

The lowest percentage (~17%) of LPNs 55 years and older were working in Public Health as compared to the younger cohorts. In the Inpatient Care employment settings, more than one in four LPNS were 55 or older.

Figure 5. Percentage of LPNs 55 Years and Older by Employment Setting
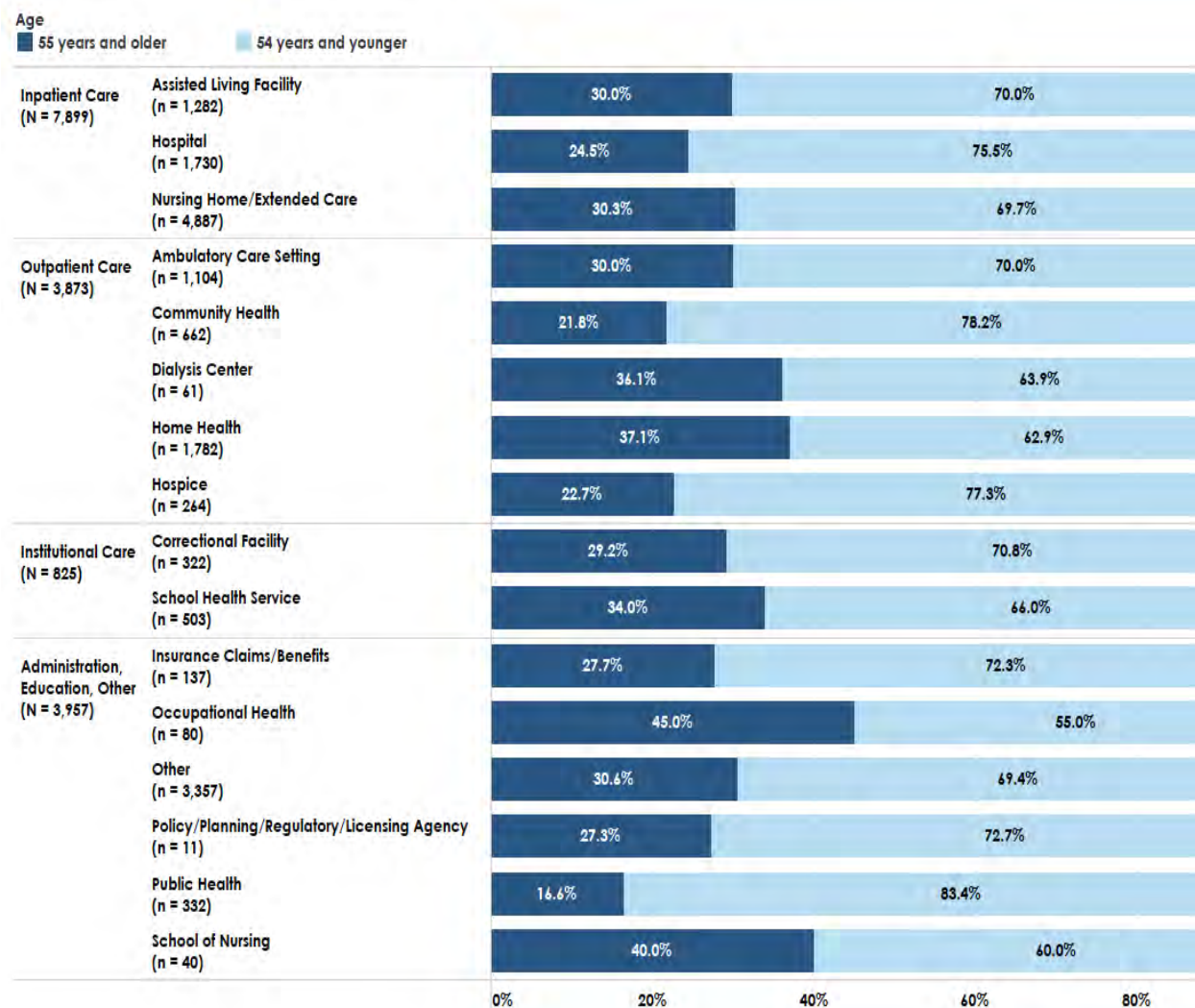
*Figure 5 does not include LPNs who did not report their employment setting (N = 211).

Figure 6 maps the percentage of LPNs who were 55 years and older and employed in Missouri counties or the City of St. Louis. The percentage of nurses aged 55 or older ranged from 15% (Carter County and Mercer County) to 54% (Worth County). The zero percent in Figure 6 exhibits that no LPN nurses who were aged 55 and older were working in that county.

Figure 6. LPN Percentage of Nurses 55 Years and Older by County
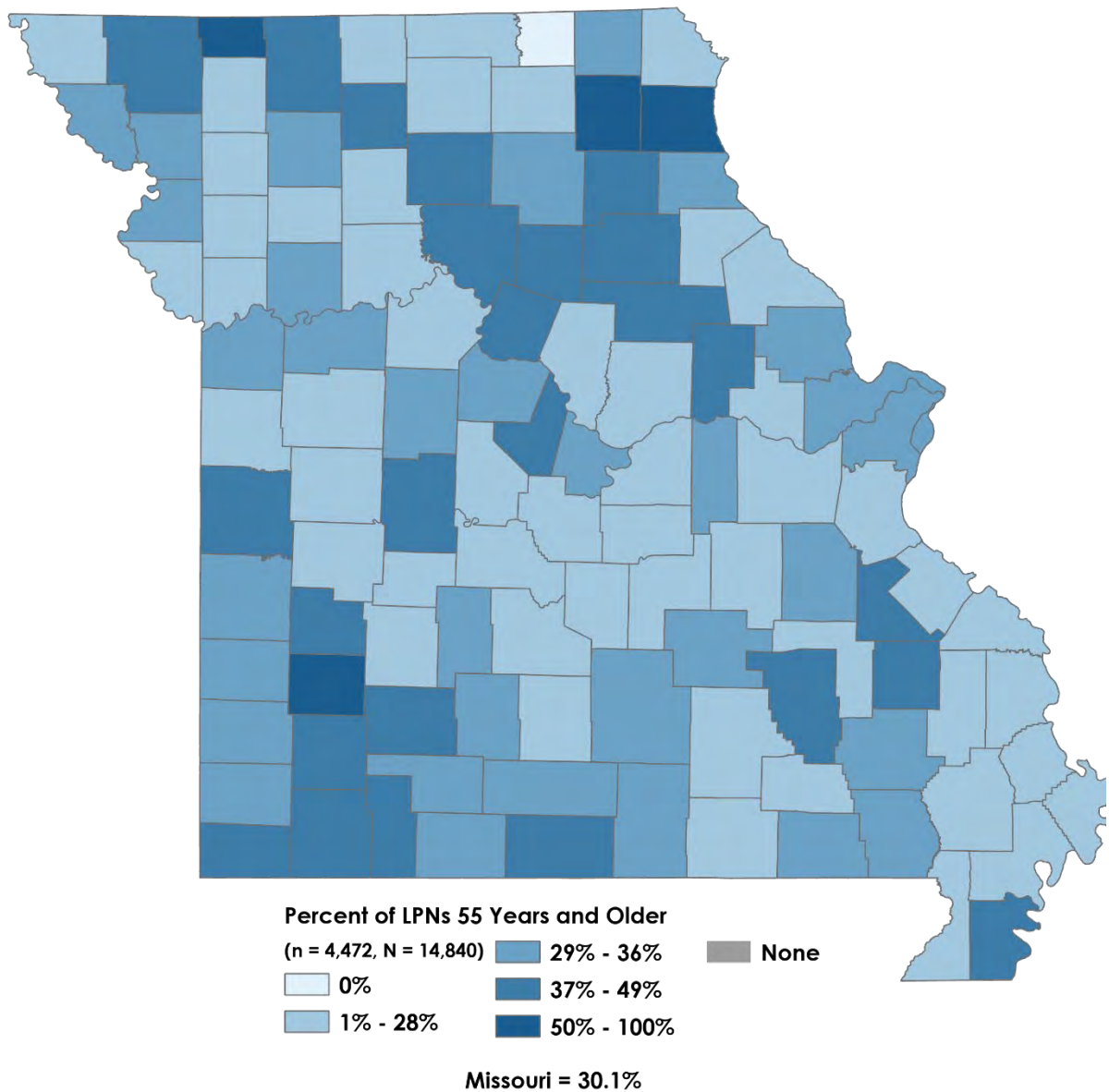
Percent of LPNs 55 Years and Older
(n = 4,472, N = 14,840)

- 0%
- 1% - 28%
- 29% - 36%
- 37% - 49%
- 50% - 100%
- None

Missouri = 30.1%

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023

LPN Education Characteristics

Figure 7 compares LPNs' education level as defined by degree types at the initiation of their nursing careers and as their highest level of education.

Approximately 95% or more of Missouri's LPNs both begin nursing with an LPN/VN certificate and continue to hold that credential as their highest educational credential for licensing purposes throughout their careers.

Figure 7. LPN Education Level Starting Education and Highest Education Level

Education Level	Degree Type	
Starting Education Level (N = 11,358)	LPN/VN Certificate (n = 10,946)	96.4%
	Nursing Diploma (n = 54)	0.5%
	Nursing Associate's Degree (n = 358)	3.1%
Highest Education Level (N = 20,781)	LPN/VN Certificate (n = 19,784)	95.2%
	Nursing Diploma (n = 86)	0.4%
	Nursing Associate's Degree (n = 886)	4.3%
	Nursing Baccalaureate Degree (n = 25)	0.1%
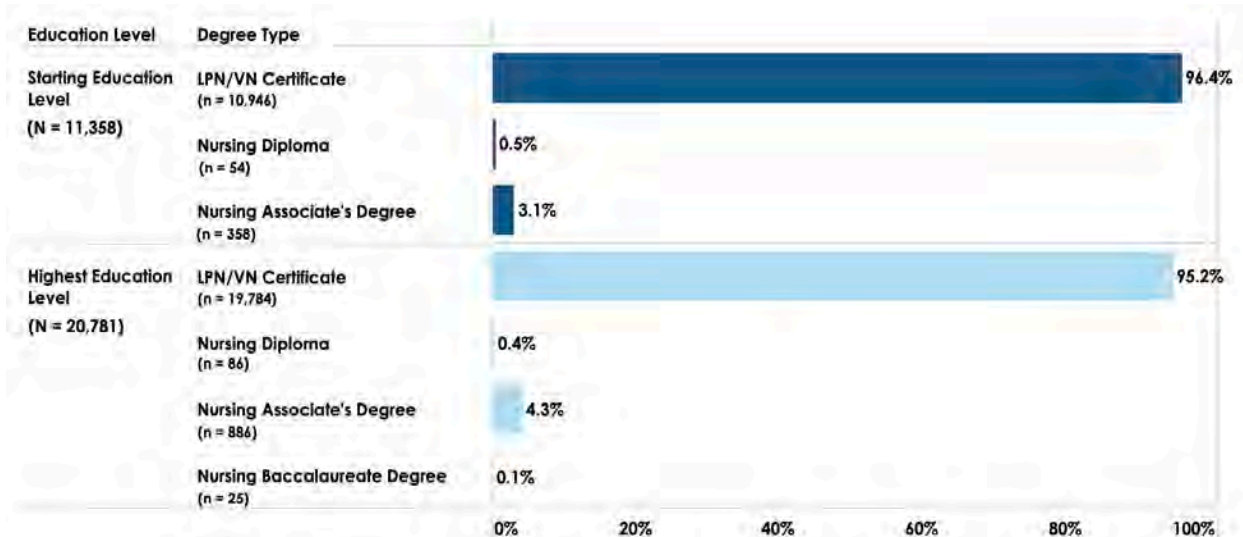
*Figure 7 does not include the LPNs who did not indicate a starting (N = 10,962) or highest education level (N = 1,539).

LPN Employment Characteristics

Figure 8. LPN Employment Group Type Employment Setting

23.9%
(n = 3,957)

5.0%
(n = 825)

47.7%
(n = 7,899)

23.4%
(n = 3,873)

LPN
(N = 16,554)

Employment Group Type
■ Inpatient
■ Outpatient
■ Institutional
■ Administration, Education & Other
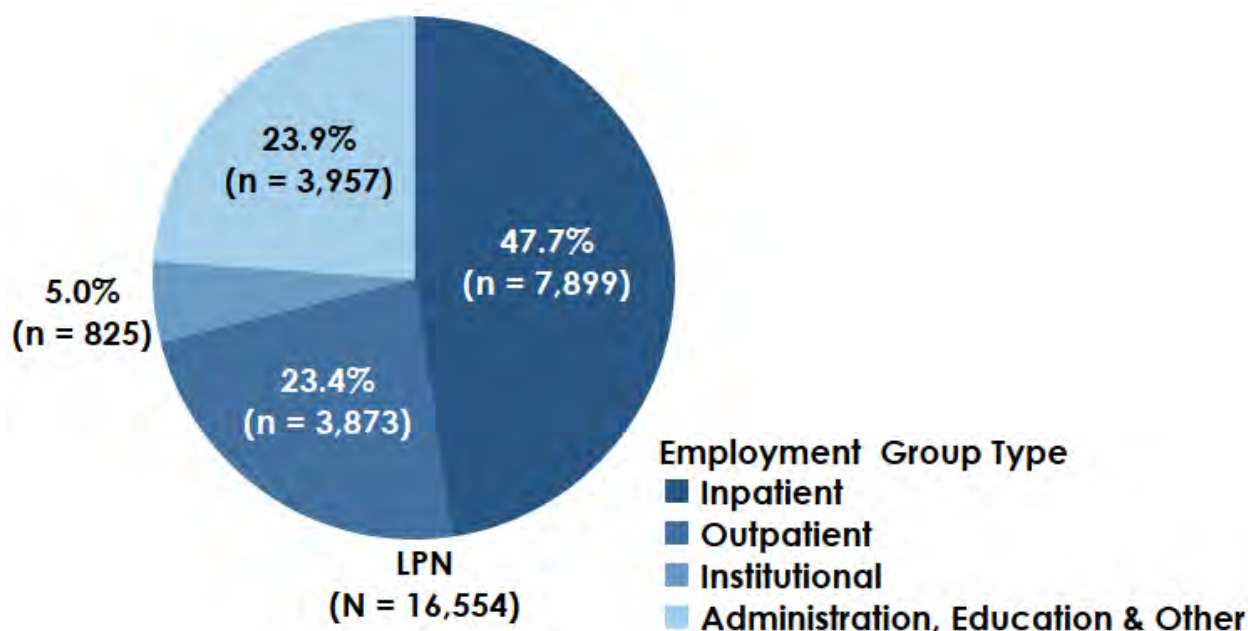
Almost half of the LPNs were working in an inpatient setting (47.7%), and of the inpatient setting categories, 78% worked in nursing home/extended care settings. Further, almost 50% of all LPNs were employed in home health types of services (home health, nursing home/extended care, assisted living facility, and hospice).

However, more than one in four LPNs worked in outpatient clinics (23.4%) or institutional settings (5%), such as correctional facilities and pre-K-12 schools. Five percent of the LPNs were employed in public health, policy, and administrative positions.

LPN Employment Setting

Forty percent of Missouri's LPN workforce were employed by long-term care and assisted living facilities. An additional 10% were employed by home health services, positioning the LPN workforce as core to supporting Missouri's aging population. An additional 10% of LPNs were employed in hospital settings.

Of note for additional analysis, 'other' is a survey response to many of the questions asked on the Nursys survey. Approximately 20% of LPNs responding to the employment setting survey question selected 'other'. Upon noting this response rate to the 'other' category, the MSBN and CHP requested the open-ended responses related to 'other' and will be conducting further review and analysis of these data.

The LPN workforce importantly served Missouri's seniors and persons with disabilities. The remaining approximately 20% of Missouri LPNs worked in outpatient, institutional, administrative, and educational settings.

Figure 9. LPN Employment Settings

Employment Group	Employment Setting	
Inpatient (N = 7,899)	Hospital (n = 1,730)	10.5%
	Nursing Home/Extended Care (n = 4,887)	29.5%
	Assisted Living Facility (n = 1,282)	7.7%
Outpatient (N = 3,873)	Ambulatory Care (n = 1,104)	6.7%
	Community Health (n = 662)	4.0%
	Dialysis Center (n = 61)	0.4%
	Home Health (n = 1,782)	10.8%
	Hospice (n = 264)	1.6%
Institutional (N = 825)	Correctional Facility (n = 322)	1.9%
	School Health Service (n = 503)	3.0%
Administration, Education, & Other (N = 3,957)	Insurance Claims/Benefits (n = 137)	0.8%
	Occupational Health (n = 80)	0.5%
	Policy/Planning/Regulatory/Licensing Agency (n = 11)	0.1%
	Public Health (n = 332)	2.0%
	School of Nursing (n = 40)	0.2%
	Other (n = 3,357)	20.3%

LPN Employment Specialty

Consistent with the employment setting analysis, the majority of LPNs reported 'geriatric/ gerontology' (33.6%) and 'home health' (8.3%) most often as their employment specialty and roughly 4% reported 'rehabilitation' as their primary specialty. LPNs working in both inpatient and outpatient clinical settings reported specialties across the population health spectrum from obstetrics and pediatrics to palliative and hospice care. Approximately 6% of LPNs specialized in 'mental/behavioral health' care, while 1.4% specialized in 'public health'.

Figure 10. LPN Employment Specialty

Specialty	Percent
Acute Care/Critical Care (n = 390)	2.6%
Adult Health (n = 969)	6.3%
Anesthesia (n < 10)	0.0%
Cardiology (n = 175)	1.1%
Community (n = 278)	1.8%
Emergency / Trauma (n = 113)	0.7%
Family Health (n = 1,060)	6.9%
Geriatric/Gerontology (n = 5,139)	33.6%
Home Health (n = 1,266)	8.3%
Maternal-Child Health/Obstetrics (n = 107)	0.7%
Medical Surgical (n = 599)	3.9%
MH/BH (n = 942)	6.2%
Neonatal (n < 10)	0.0%
Nephrology (n = 69)	0.5%
Occupational Health (n = 93)	0.6%
Oncology (n = 83)	0.5%
Palliative Care/Hospice (n = 258)	1.7%
Pediatrics (n = 935)	6.1%
Perioperative (n = 33)	0.2%
Public Health (n = 211)	1.4%
Rehabilitation (n = 544)	3.6%
School Health (n = 430)	2.8%
Women's Health (n = 238)	1.6%
Other - Clinical Specialties (n = 1,130)	7.4%
Other - Non-Clinical Specialties (n = 208)	1.4%

(N = 15,280)

*Figure 10 does not include the LPNs who did not indicate an employment specialty (N = 7047).

LPN Employment Location by County

Figure 11 maps the rate of the nursing workforce employed in a county with a LPN license per population of 10k, ranging from approximately a rate of 7 LPNs per population of 10k in Newton County to a rate of 86.5 LPNs per population of 10k in Marion County. Figure 12 illustrates this distribution by employment setting mapped by a rate of LPNs per population of 10k.

Figure 11. LPN Employment Location by County (County of Employment)
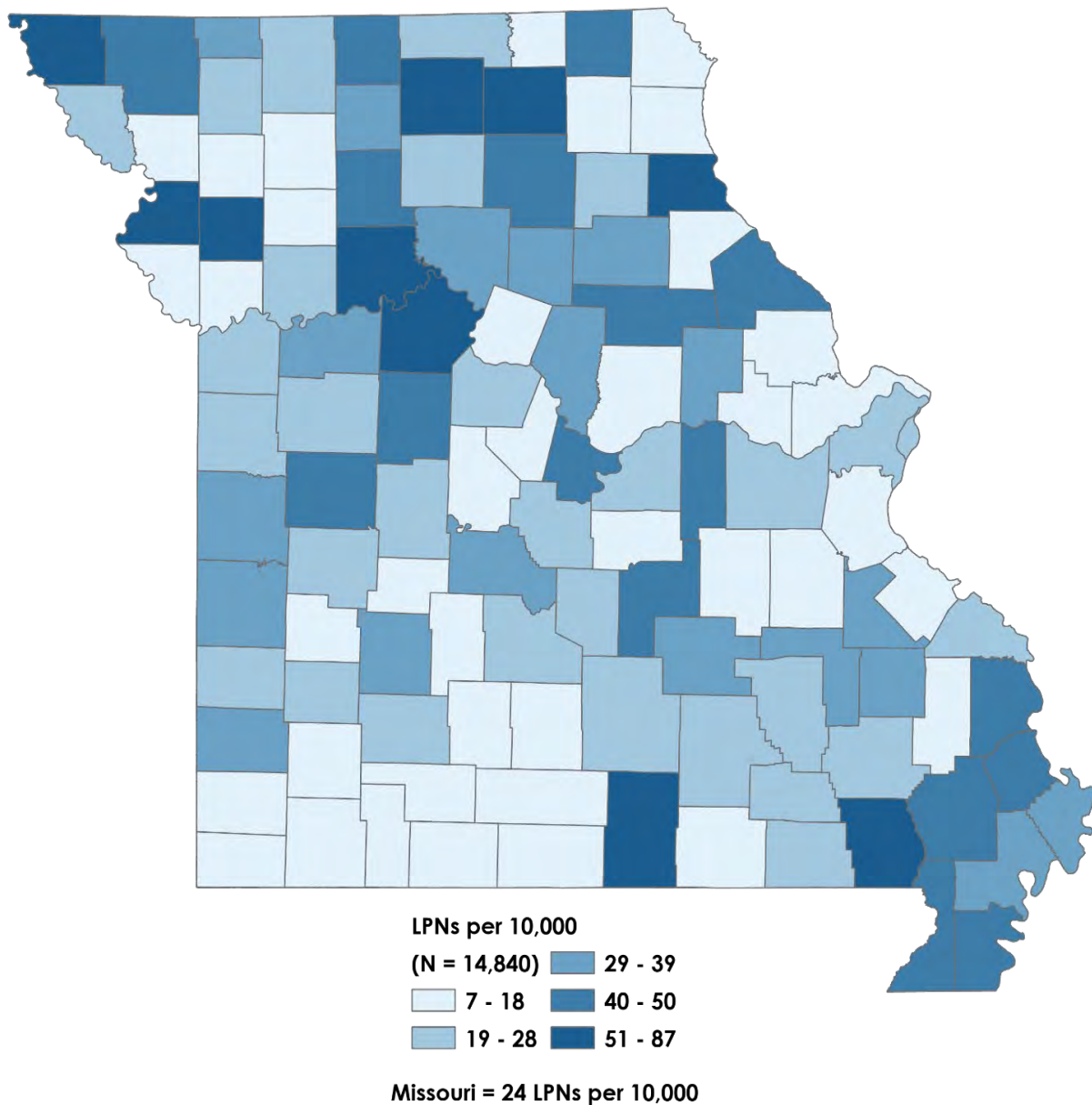
LPNs per 10,000

(N = 14,840)   ▨ 29 - 39

☐ 7 - 18   ▨ 40 - 50

▨ 19 - 28   ▨ 51 - 87

Missouri = 24 LPNs per 10,000

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023

Figure 12. LPN Employment Setting by County as a Rate per 10K

LPNs in Inpatient Setting

(N = 7,165) ☐ 8 - 12 ☐ 19 - 26 ☐ None
☐ 3 - 7 ☐ 13 - 18 ☐ 27 - 38

Inpatient setting includes Hospital, Assisted Living Facility
and Nursing Home/Extended Care

LPNs in Outpatent Setting

(N = 3,385) ☐ 3 - 5 ☐ 10 - 13 ☐ None
☐ <1 - 2 ☐ 6 - 9 ☐ 14 - 19

Outpatient setting includes Ambulatory Care, Home Health,
Community Health, Dialysis Center, Hospice
and Physician's Office/Primary Care

LPNs in Admin, Education, Other Setting

(N = 3,497) ☐ 5 - 8 ☐ 14 - 21 ☐ None
☐ <1 - 4 ☐ 9 - 13 ☐ 22 - 36

Admin, Education, Other Setting includes Public Health,
Occupational Health, Insurance Claims/Benefits,
Policy/Planning/Regulatory/Licensing Agency,
School of Nursing and Other

LPNs in Institutional Setting

(N = 750) ☐ 1 - 2 ☐ 5 - 7 ☐ None
☐ < 1 ☐ 3 - 4 ☐ 8 - 11

Institutional Setting includes Correctional Facility
and School Health Service

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

It is important to note that LPNs work for a wide array of public and private employers who deploy position titles and descriptions to meet their organizational needs rather than conform in every case to a standard title with standardized job requirements.

Advanced practice nurse titles may be indicative of an industry norm associated with job titles and not necessarily job responsibilities and scopes of practice within the position/job title.

Figure 13. LPN Number of Positions Held

License Type

LPN (n = 16,608)	88.3%	10.7%	1.0%

■ One ■ Two ■ Three
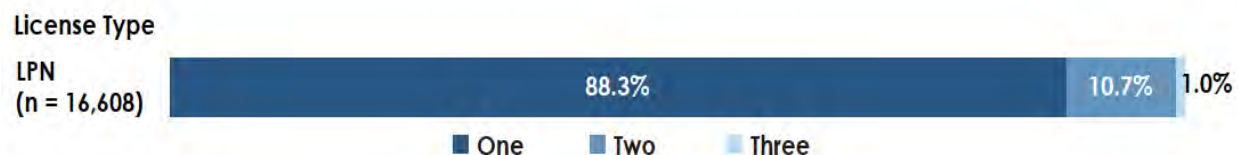
*Figure 13 does not include the LPNs who did not indicate the number of positions they held (N = 5,719).

Figure 14. Position Description of LPNs

Figure 14 identifies LPNs' responses to the Nursys survey question asking them to report their position title in their primary position.

Position	Percentage
Advanced Practice Nurse (n = 71)	0.4%
Staff Nurse (n = 12,797)	77.8%
Nurse Manager (n = 1,131)	6.9%
Nurse Researcher (n = 14)	0.1%
Nurse Faculty (n = 219)	1.3%
Other - Health Related (n = 1,722)	10.5%
Nursing Consultant (n = 45)	0.3%
Nurse Executive (n = 96)	0.6%
Other - Not Health Related (n = 93)	0.6%
Case Manager (n = 255)	1.6%

(N = 16,443)
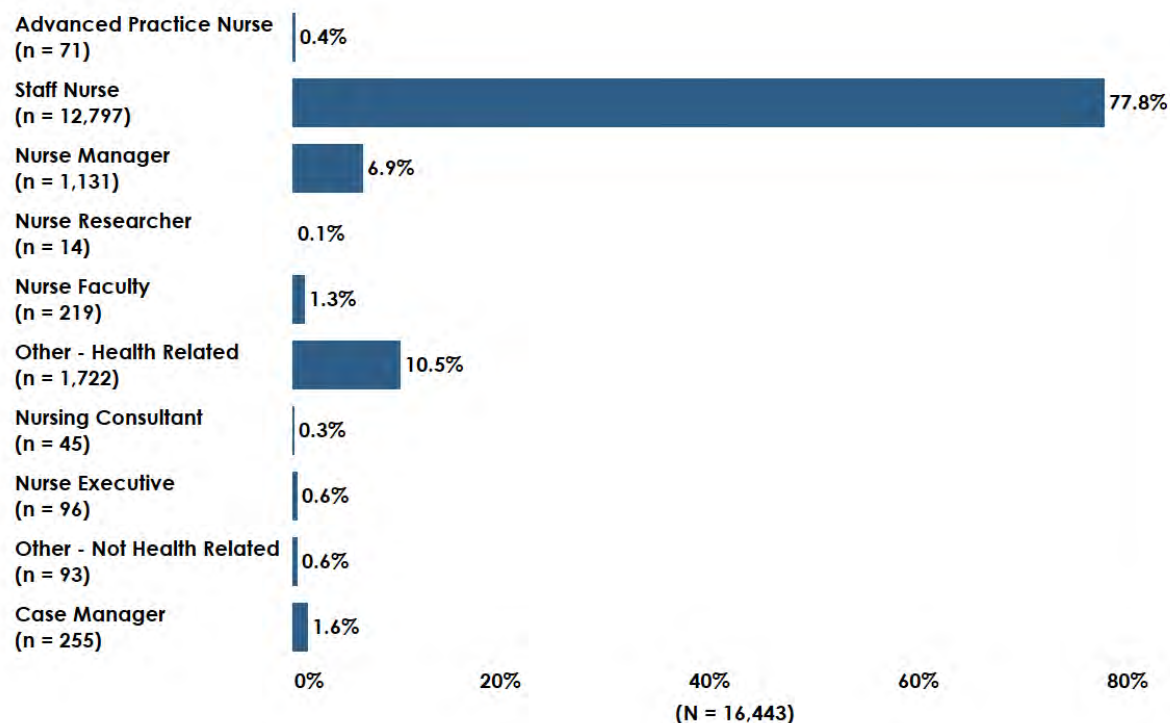
LPN Average Hours

Figure 15. LPN Average Hours Working Per Week

Average Hours Per Week
- 0-35
- 36-40
- 41-50
- 51+

6.5%
(n = 1,078)

15.2%
(n = 2,530)

13.1%
(n = 2,175)

65.2%
(n = 10,822)

LPN
(N = 16,605)
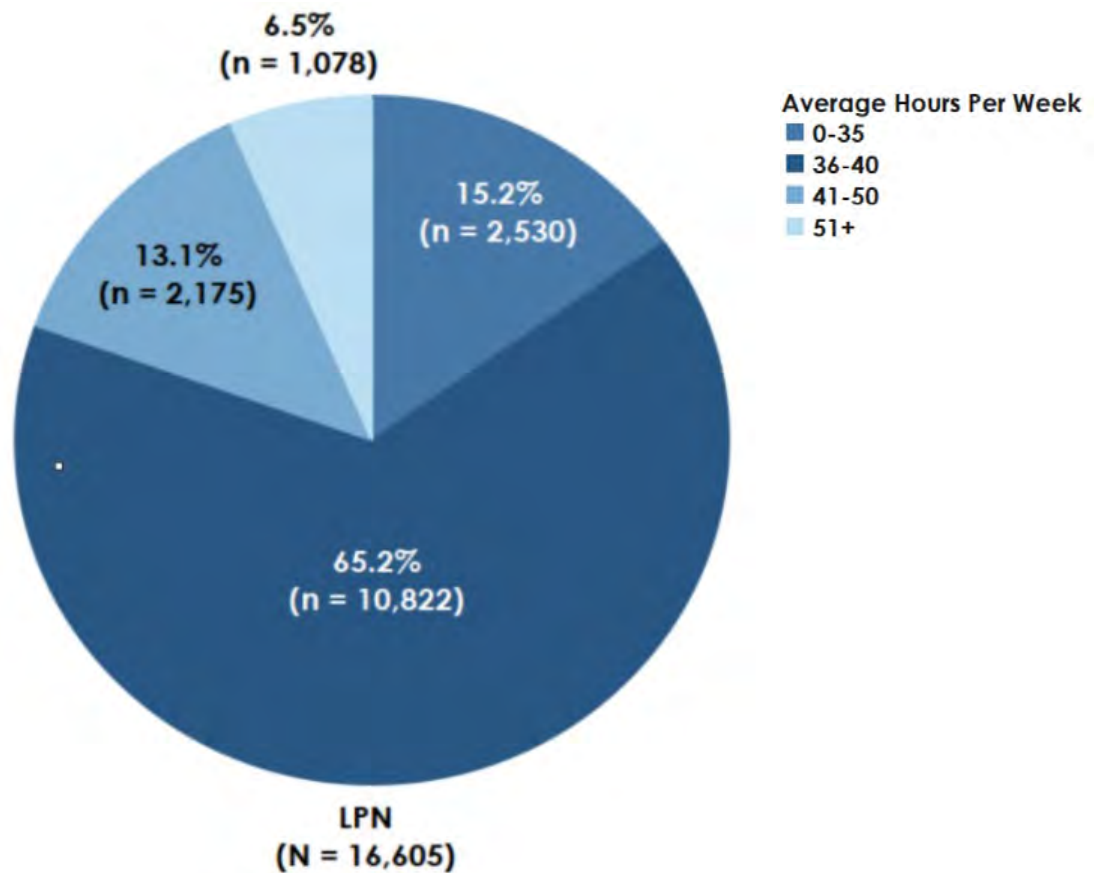
*Figure 15 does not include respondents who reported N/A (N = 5,722).

The LPN workforce typically held one position (88.3%) in a staff nurse position (77.8%) working an average of 36-40 hours per workweek (65.2%).

Figure 16 presents the geographic distribution of LPNs by reported employment setting by Missouri's Behavioral Risk Factor Surveillance Survey region (BRFSS).

The aggregation to the region displays the overall Missouri geographic distribution with detailed breakouts by employment setting.

Figure 16. LPN Employment Settings by Missouri Regions
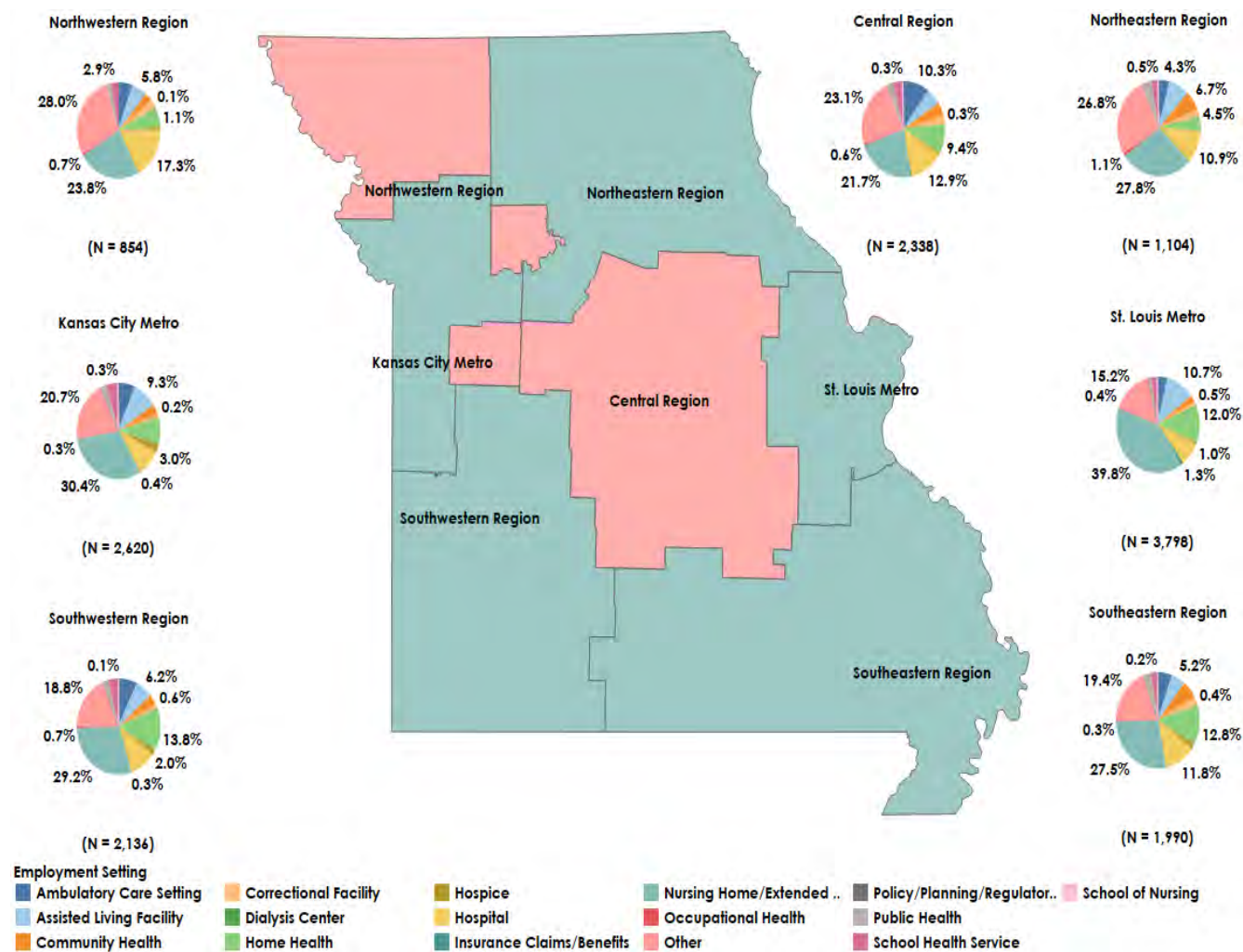
LPN Reasons for Unemployment

Figure 17. LPN Reasons for Unemployment
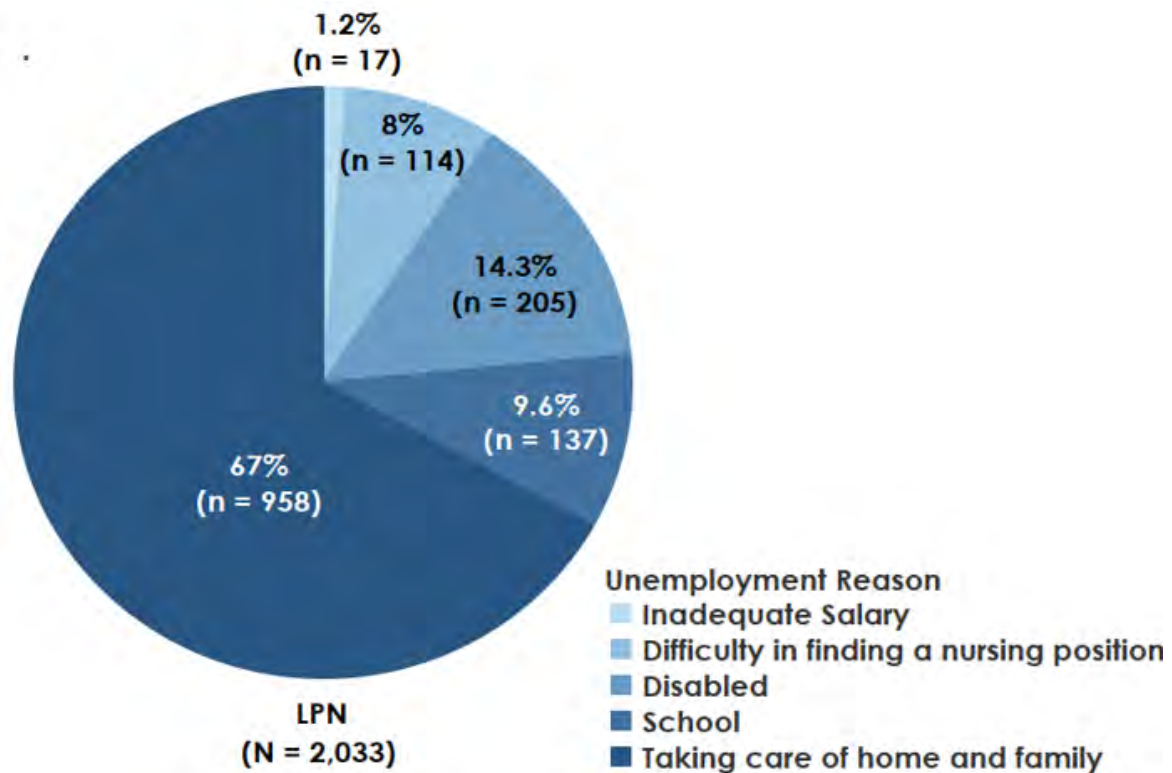
*Figures 17 and 18 do not include N/A responses (N = 84) or who chose not to answer (N = 518).

Most LPNs were unemployed to take care of their home/family, exhibiting the challenges faced by the overall workforce, while a small percent reported salary levels as disincentive to workforce participation in an LPN role.

Policies that support work/life balance might make workforce participation more manageable for LPNs choosing unpaid caregiving as their economic contribution to their households.

Figure 18 maps the rate of the LPNs, who reported being unemployed, per population of 10k by the LPN's County of residence.

Figure 18. LPN County of Residence for Unemployed Nurses

LPNs per 10,000

(N = 1,025)

- 3 - 4
- None
- < 1
- 5 - 7
- 1 - 2
- 8 - 15
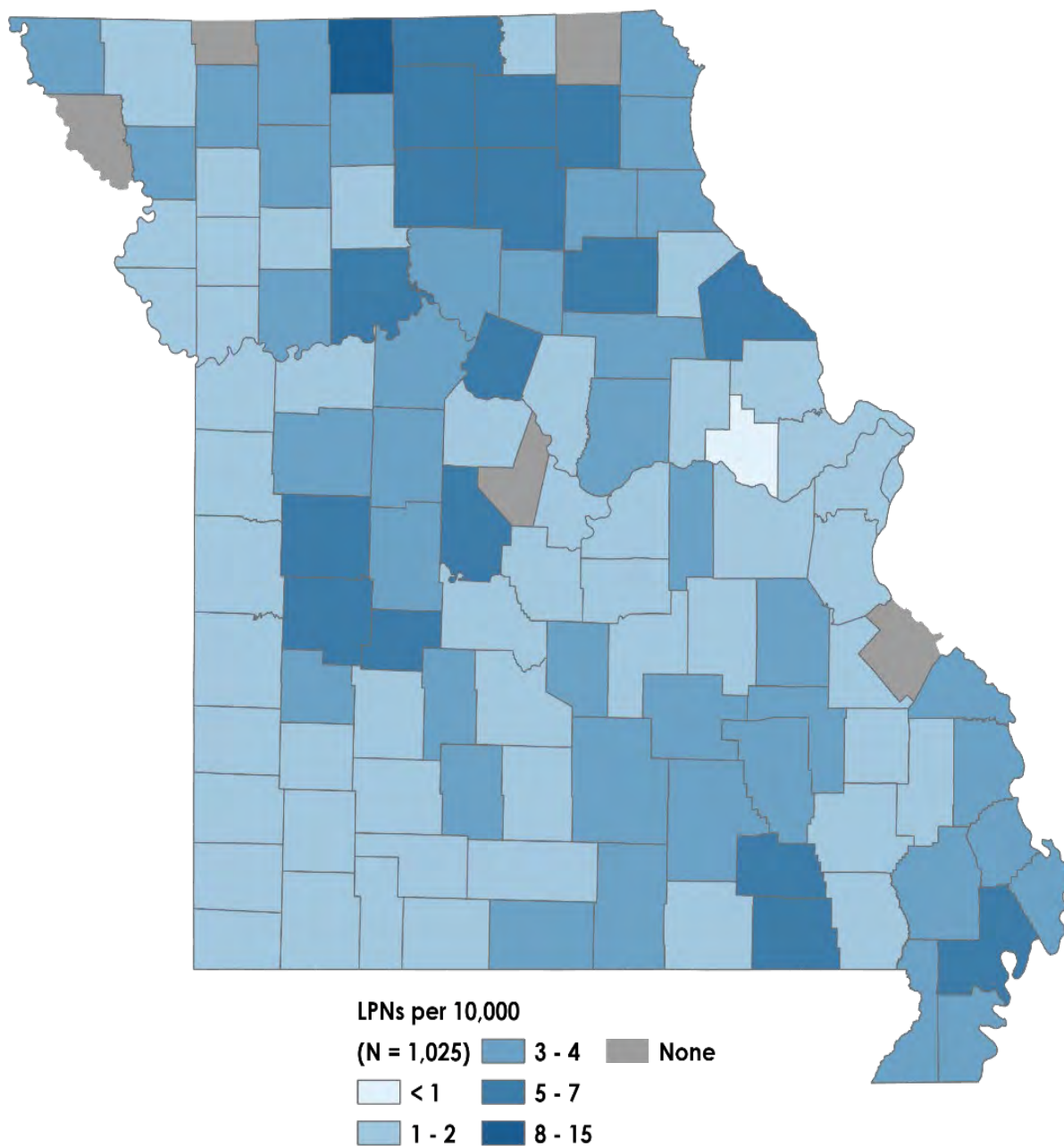
Missouri = 2 LPNs per 10,000

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023

Registered Nurse (RN)

RNs comprised most of the Missouri nursing workforce, representing 75% of the Missouri nursing workforce (103,372 RNs of the 134,599 total nursing workforce). Most RNs reported providing nursing services in inpatient care employment settings (66.7%) in metropolitan counties.

RN Demographic Characteristics

The largest age cohort for RNs was 25-34 (23.2%) and 35-44 (22.4%), representing more than 45% of the workforce. RNs predominately comprised of nurses reporting as white (87.4%) females (90.7%).

RN Age Characteristics

The mean age of the RN workforce was 46, the median was 45, and the modal age was 38. With more RNs within retirement ages 55-64 (17.7%) compared to those entering nursing 17-24 (4%).

Figure 19. RN Age Distribution

| RN (N = 103,948) | 4.0% | 23.2% | 22.4% | 18.2% | 17.7% | 14.5% |

17-24   25-34   35-44   45-54   55-64   65+
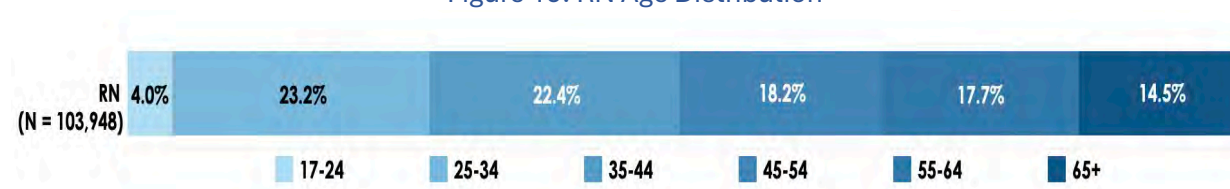
RN Gender Characteristics

Figure 20. RN Gender Characteristics

9.3% (n = 9,531)

90.7% (n = 93,095)

RN (N = 102,626)

■ Female
■ Male
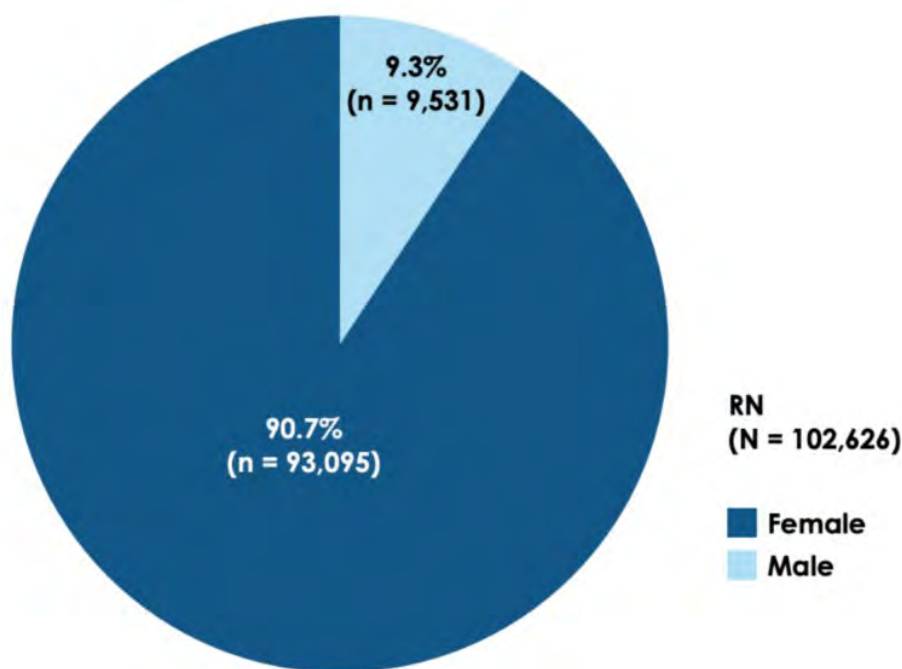
*To protect privacy, data on those identifying as non-binary and those who did not answer the question (n = 1,270) were not included in the analysis.

RN Race and Ethnicity Characteristics

Figure 21. RNs by Race and Ethnicity
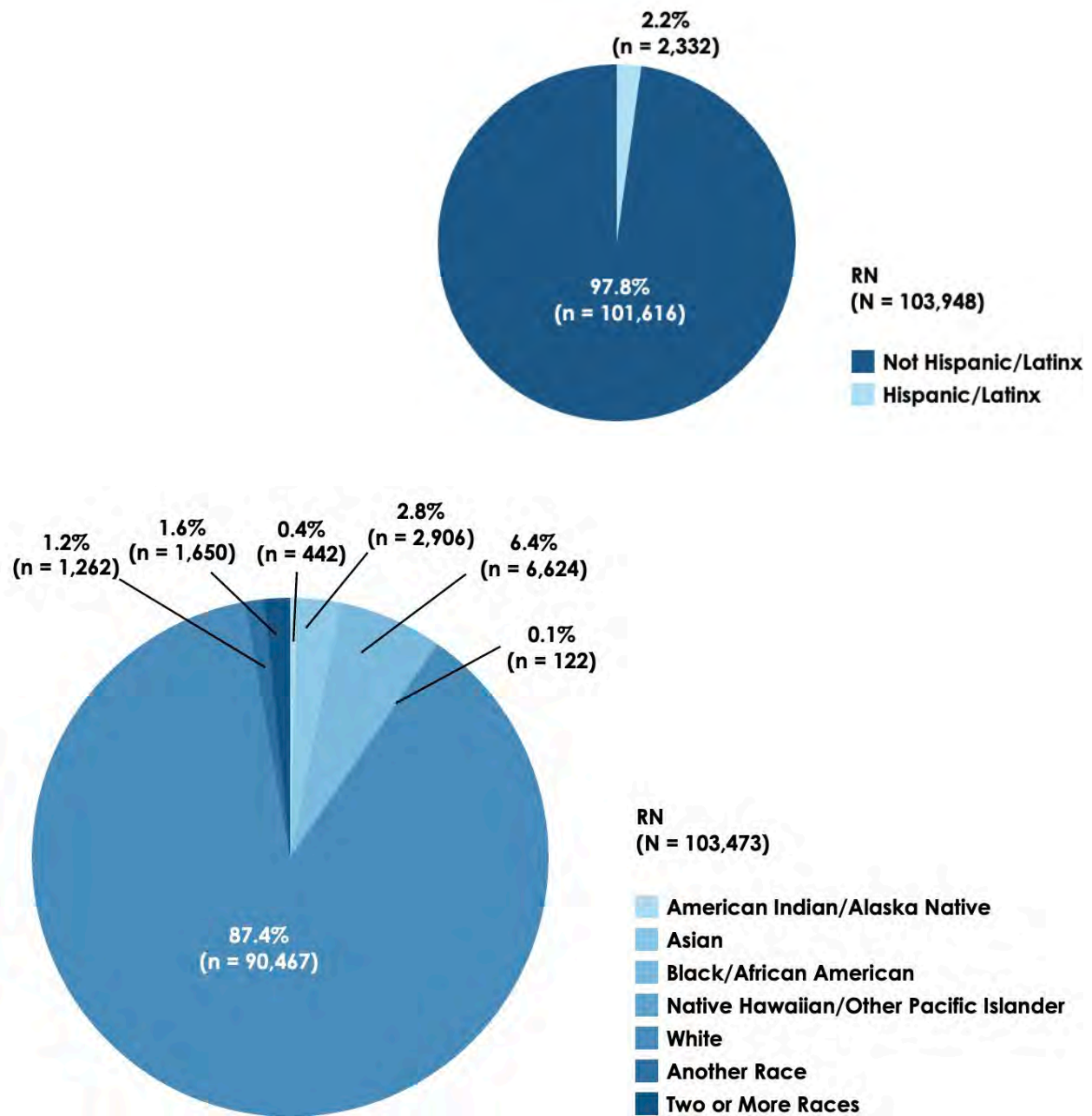
2.2%
(n = 2,332)

97.8%
(n = 101,616)

RN
(N = 103,948)

■ Not Hispanic/Latinx
■ Hispanic/Latinx

1.2%
(n = 1,262)

1.6%
(n = 1,650)

0.4%
(n = 442)

2.8%
(n = 2,906)

6.4%
(n = 6,624)

0.1%
(n = 122)

87.4%
(n = 90,467)

RN
(N = 103,473)

■ American Indian/Alaska Native
■ Asian
■ Black/African American
■ Native Hawaiian/Other Pacific Islander
■ White
■ Another Race
■ Two or More Races

RN Nurses by Employment County and Employment Setting

Analysis of the 2023 Nursys survey data revealed that RNs 55 years and older comprised more than 34% of the workforce with most RNs working in inpatient long-term care employment settings.

The age distribution across employment settings represented a higher percentage of nurses under 54 years and younger working in all settings with comparable employment settings in schools of nursing, home health, and policy/planning/regulatory/licensing agencies and even split (50%) in the occupational health employment setting.

Figure 22. Percentage of RNs 55 Years and Older by Employment Setting

Age	55 years and older	54 years and younger
Inpatient Care (N = 55,407)	Assisted Living Facility (n = 667)	33.3% / 66.7%
	Hospital (n = 51,464)	19.5% / 80.5%
	Nursing Home/Extended Care (n = 3,276)	39.8% / 60.2%
Outpatient Care (N = 11,212)	Ambulatory Care Setting (n = 5,151)	35.2% / 64.8%
	Community Health (n = 1,229)	37.7% / 62.3%
	Dialysis Center (n = 926)	34.0% / 66.0%
	Home Health (n = 2,626)	45.3% / 54.7%
	Hospice (n = 1,280)	36.3% / 63.8%
Institutional Care (N = 2,400)	Correctional Facility (n = 486)	27.2% / 72.8%
	School Health Service (n = 1,914)	35.8% / 64.2%
Administration, Education, Other (N = 14,071)	Insurance Claims/Benefits (n = 2,036)	34.5% / 65.5%
	Occupational Health (n = 338)	50.0% / 50.0%
	Policy/Planning/Regulatory/Licensing Agency (n = 185)	45.4% / 54.6%
	Public Health (n = 869)	33.1% / 66.9%
	School of Nursing (n = 1,303)	48.1% / 51.9%
	Other (n = 9,340)	38.3% / 61.7%

*Figure 22 does not include the RNs who did not report their employment setting (N = 1,171).

Figure 23 maps the percentage of RNs who were 55 years and older by the Missouri county employed in or the City of St. Louis. The percentage of nurses aged 55 or older ranged from 7.7% in Mercer County to 60% in Stone County.

Figure 23. RN Percentage of Nurses 55 Years and Older by County

Percent of RNs 55 Years and Older

(n = 18,201, N = 66,995)

- 8% - 15%
- 16% - 28%
- 29% - 36%
- 37% - 49%
- 50% - 100%
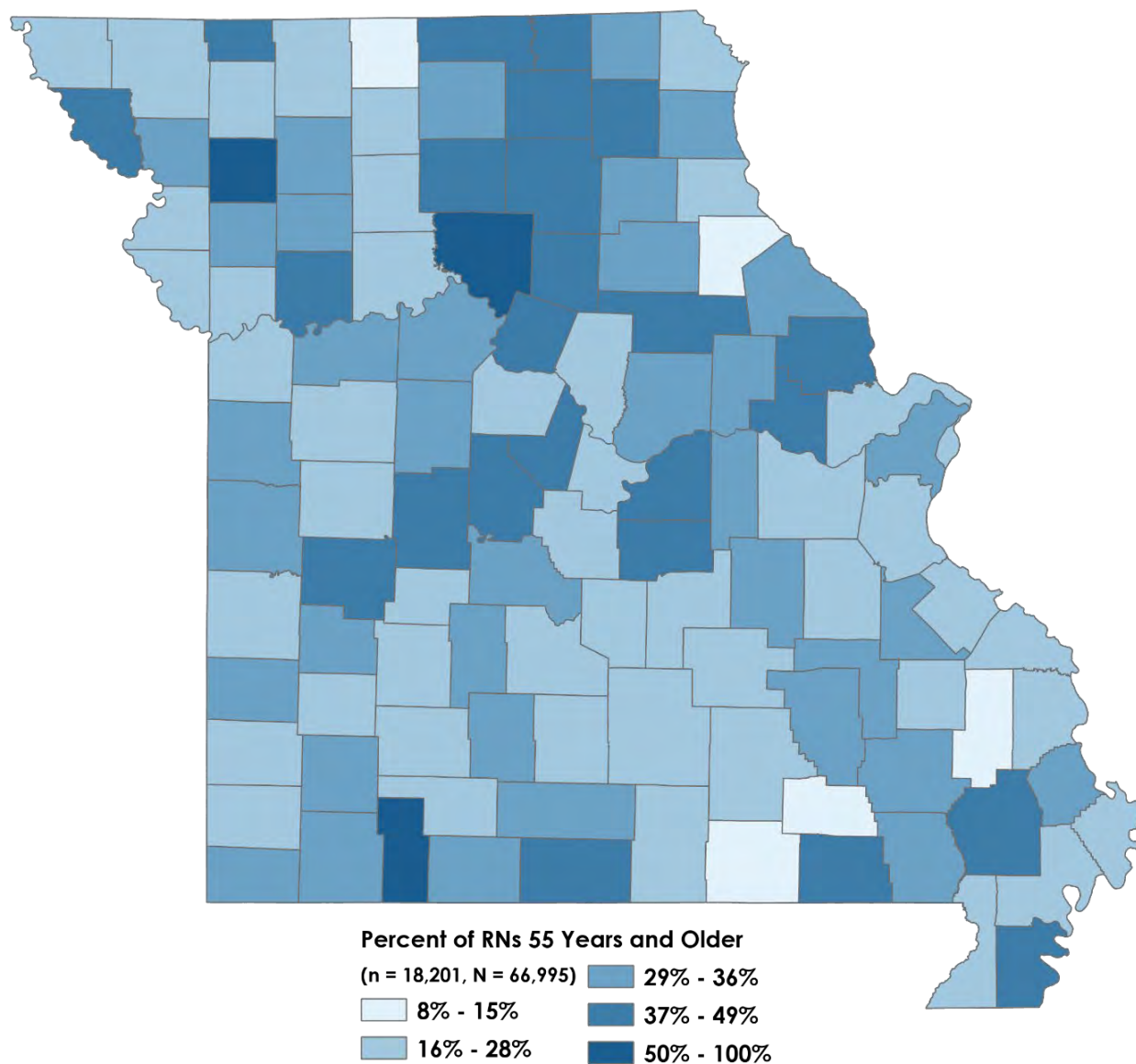
Missouri = 26.3%

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023

RN Education Characteristics

Nurses can obtain a RN license by earning an associate's degree in nursing (ADN) or a bachelor's degree in nursing (BSN). More than half (53.3%) of the RN workforce's highest earned degree was their BSN.

Figure 24. RN Education Level Starting Education and Highest Education Level

Education Level	Degree Type	
Starting Education Level **(N = 56,087)**	LPN/VN Certificate (n = 4,016)	7.2%
	Nursing Diploma (n = 5,520)	9.8%
	Nursing Associate's Degree (n = 18,989)	33.9%
	Nursing Baccalaureate Degree (n = 26,587)	47.4%
	Nursing Master's Degree (n = 917)	1.6%
	Nursing Doctoral Degree - DNP (n = 35)	0.1%
	Nursing Doctoral Degree - PhD/Non-Nursing (n = 23)	0.0%
Highest Education Level **(N = 100,270)**	LPN/VN Certificate (n = 1,262)	1.3%
	Nursing Diploma (n = 7,477)	7.5%
	Nursing Associate's Degree (n = 30,852)	30.8%
	Nursing Baccalaureate Degree (n = 53,476)	53.3%
	Nursing Master's Degree (n = 7,145)	7.1%
	Nursing Doctoral Degree - DNP (n = 35)	0.0%
	Nursing Doctoral Degree - PhD/Non-Nursing (n = 23)	0.0%

*Figure 24 does not include RNs who did not indicate their starting education (N = 47,861) or their highest education (3,678).

RN Employment Characteristics

Figure 25. RN Employment Grouped by Employment Setting
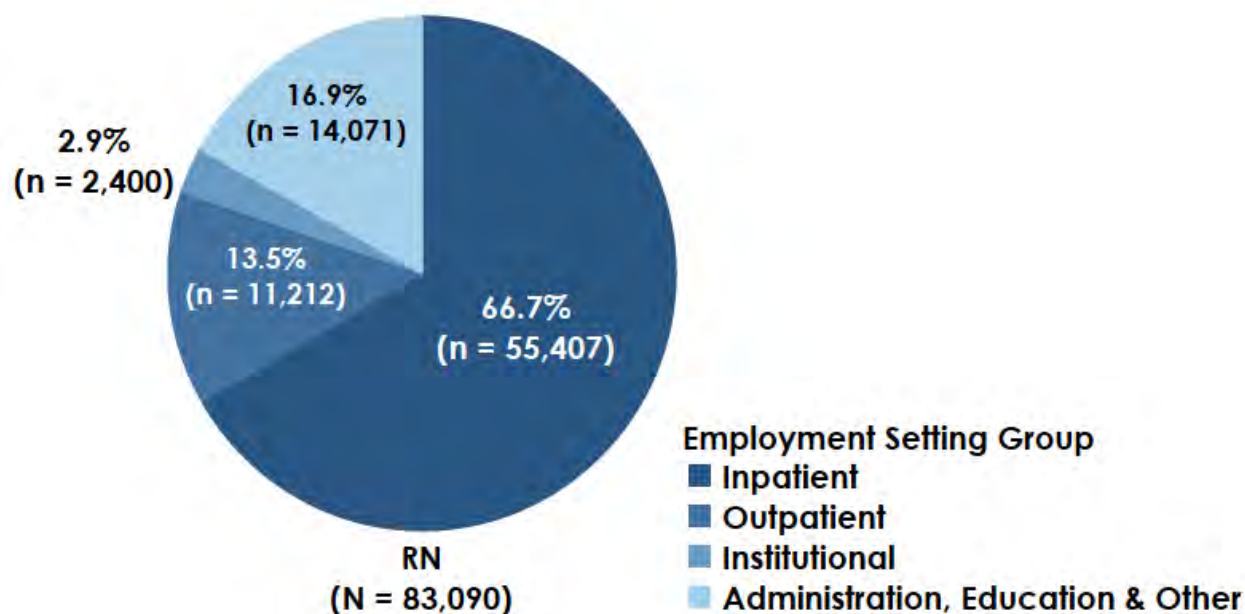
*Figure 25 does not include RNs who did not indicate their employment setting (N = 20,858).

More than half of Missouri's RN workforce was working in an inpatient setting (66.7%), and roughly one in three RNs worked in either a hospital, nursing home/extended care, or assisted living setting. Approximately 1% of Missouri's RNs report employment in public health and dialysis positions.

RN Employment Setting

Examining the distribution of RNs is exceptionally pertinent with the data demonstrating few RNs distributed among the outpatient, institutional, and administration, education, & other employment settings. RN employment rates revealed the areas with an insufficient workforce with extremely low rates elucidating areas of recruitment and retention challenges.

The distribution patterns of the RN workforce revealed most services to Missourians in hospitals (61.9%) with low rates of RNs distributed across other settings with rates as low as < 1% (occupational health [0.4%], policy and planning [0.2%], assisted living [0.8%], and correctional facilities [0.6%] employment settings comparatively).

Figure 26. RN Employment Settings

Employment Group	Employment Setting	
Inpatient (N = 55,407)	Hospital (n = 51,464)	61.9%
	Nursing Home/Extended Care (n = 3,276)	3.9%
	Assisted Living Facility (n = 667)	0.8%
Outpatient (N = 11,212)	Ambulatory Care (n = 5,151)	6.2%
	Community Health (n = 1,229)	1.5%
	Dialysis Center (n = 926)	1.1%
	Home Health (n = 2,626)	3.2%
	Hospice (n = 1,280)	1.5%
Institutional (N = 2,400)	Correctional Facility (n = 486)	0.6%
	School Health Service (n = 1,914)	2.3%
Administration, Education, & Other (N = 14,071)	Insurance Claims/Benefits (n = 2,036)	2.5%
	Occupational Health (n = 338)	0.4%
	Policy/Planning/Regulatory/Licensing Agency (n = 185)	0.2%
	Public Health (n = 869)	1.0%
	School of Nursing (n = 1,303)	1.6%
	Other (n = 9,340)	11.2%

RN Employment Speciality

The majority of the Missouri RN workforce reported 'acute care/critical care' (14.8%) and 'medical-surgical' (11.7%) most often as their employment specialty. Approximately 7.2% specialized in 'emergency/trauma' while 1.1% in 'public health'. *Figure 27 does not include RNs who did not indicate a specialty (N = 25,028).

Figure 27. RN Employment Specialty

Specialty	Percentage
Acute Care/Critical Care (n = 11,716)	14.8%
Adult Health (n = 2,604)	3.3%
Anesthesia (n = 253)	0.3%
Cardiology (n = 4,419)	5.6%
Community (n = 929)	1.2%
Emergency/Trauma (n = 5,726)	7.2%
Family Health (n = 903)	1.1%
Geriatric/Gerontology (n = 3,826)	4.8%
Home Health (n = 2,366)	3.0%
Maternal-Child Health/Obstetrics (n = 3,533)	4.5%
Medical Surgical (n = 9,184)	11.7%
Neonatal (n = 2,290)	2.9%
Nephrology (n = 1,030)	1.3%
Occupational Health (n = 523)	0.7%
Oncology (n = 2,722)	3.4%
Palliative Care/Hospice (n = 1,193)	1.5%
Pediatrics (n = 4,632)	5.9%
Perioperative (n = 4,577)	5.8%
MH/BH (n = 3,199)	4.1%
Public Health (n = 844)	1.1%
Rehabilitation (n = 1,328)	1.7%
School Health (n = 1,632)	2.1%
Women's Health (n = 1,183)	1.5%
Other - Clinical Specialties (n = 6,426)	8.1%
Other - Non-Clinical Specialties (n = 1,882)	2.4%

0%   20%

(N = 78,920)

RN Employment Location by County

Figure 28 maps the rate of the nursing workforce employed in a county with a RN license, per population of 10k, ranging from approximately a rate of 9 RNs per population of 10k in Dekalb to 328 RNs per population of 10k in St. Louis City. Figures 28 and 29 demonstrate that RNs were employed at higher rates in metropolitan counties as compared to micropolitan or rural areas.

Figure 28. RN Employment Location by County (County of Employment)
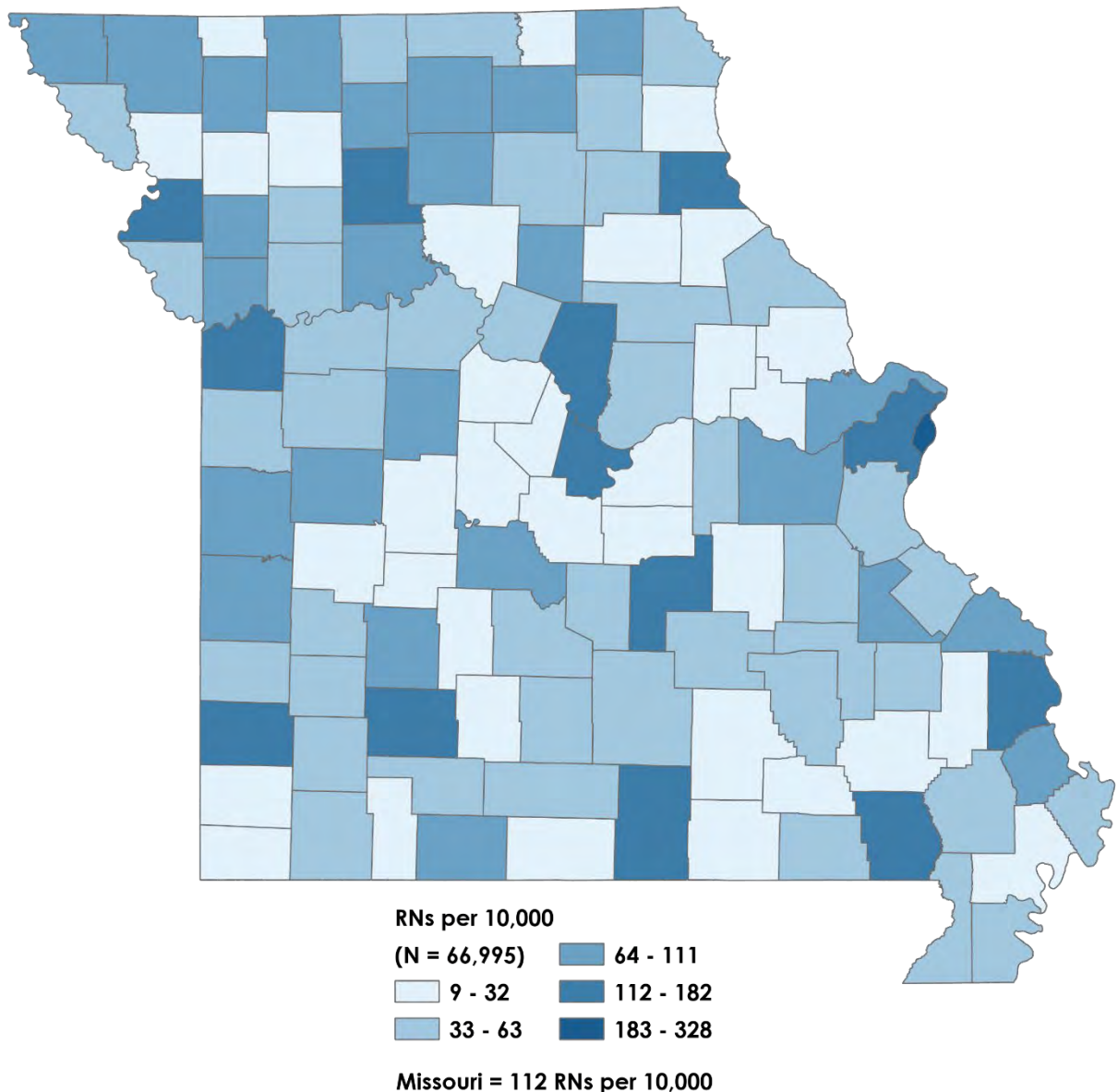
RNs per 10,000
(N = 66,995)
9 - 32
33 - 63
64 - 111
112 - 182
183 - 328

Missouri = 112 RNs per 10,000

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Figure 29. RN Employment Setting by County as a Rate per 10k

RNs in Inpatient Setting

(N = 47,191)	23 - 46	82 - 131	None
2 - 22	47 - 81	132 - 258	

Inpatient setting includes Hospital, Assisted Living Facility and Nursing Home/Extended Care

RNs in Outpatent Setting

(N = 9,115)	5 - 8	14 - 20	None
<1 - 4	9 - 13	21 - 27	

Outpatient setting includes Ambulatory Care, Home Health, Community Health, Dialysis Center, Hospice and Physician's Office/Primary Care

RNs in Admin, Education, Other Setting

(N = 10,374)	7 - 10	18 - 28	None
<1 - 6	11 - 17	29 - 39	

Admin, Education, Other Setting includes Public Health, Occupational Health, Insurance Claims/Benefits, Policy/Planning/Regulatory/Licensing Agency, School of Nursing and Other

RNs in Institutional Setting

(N = 2,158)	3 - 4	7 - 9	None
<1 - 2	5 - 6	10 - 15	

Institutional Setting includes Correctional Facility and School Health Service

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Figures 30 and 31 identifies RNs' responses to the Nursys survey questions asking them to report the total number of positions held and their position title in their primary position.

It is particularly salient to distinguish the wide variety of public and private employers who create the requirements for the RN positions including the titles assigned. Staff nurse titles may be indicative of an industry norm associated with job titles and not necessarily job responsibilities and scopes of practice within the position/job title.

Figure 30. RN Number of Positions Held

License Type

RN
(n = 83,203)

| 91.6% | 7.6% | 0.8% |

■ One   ■ Two   ■ Three
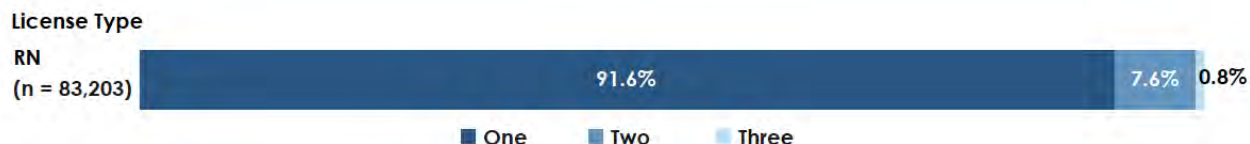
*Figure 30 does not include RNs who did not indicate how many positions they hold (N = 20,745).

Figure 31. Position Description of RNs

Advanced Practice Nurse (n = 561) — 0.7%
Staff Nurse (n = 60,209) — 73.0%
Nurse Manager (n = 5,681) — 6.9%
Nurse Researcher (n = 412) — 0.5%
Nurse Faculty (n = 2,002) — 2.4%
Other - Health Related (n = 5,828) — 7.1%
Nursing Consultant (n = 902) — 1.1%
Nurse Executive (n = 1,490) — 1.8%
Other - Not Health Related (n = 271) — 0.3%
Case Manager (n = 5,122) — 6.2%

0%   20%   40%   60%   80%

(N = 82,478)
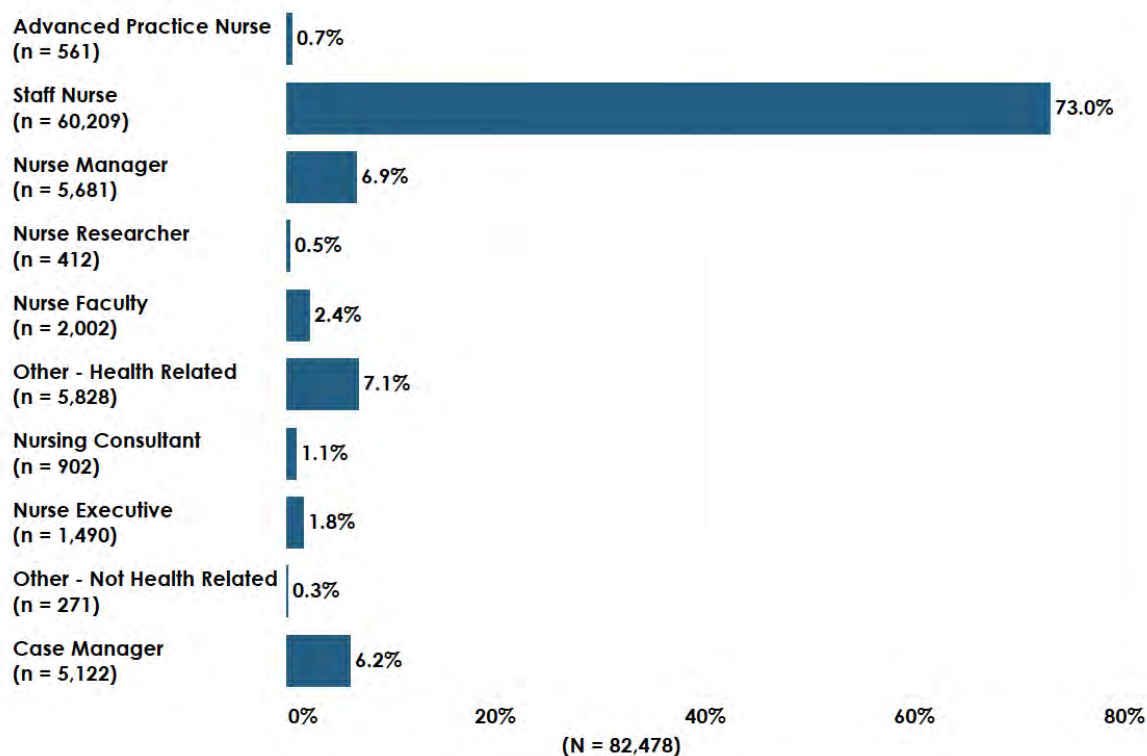
RN Average Hours

Figure 32. RN Average Hours Working Per Week
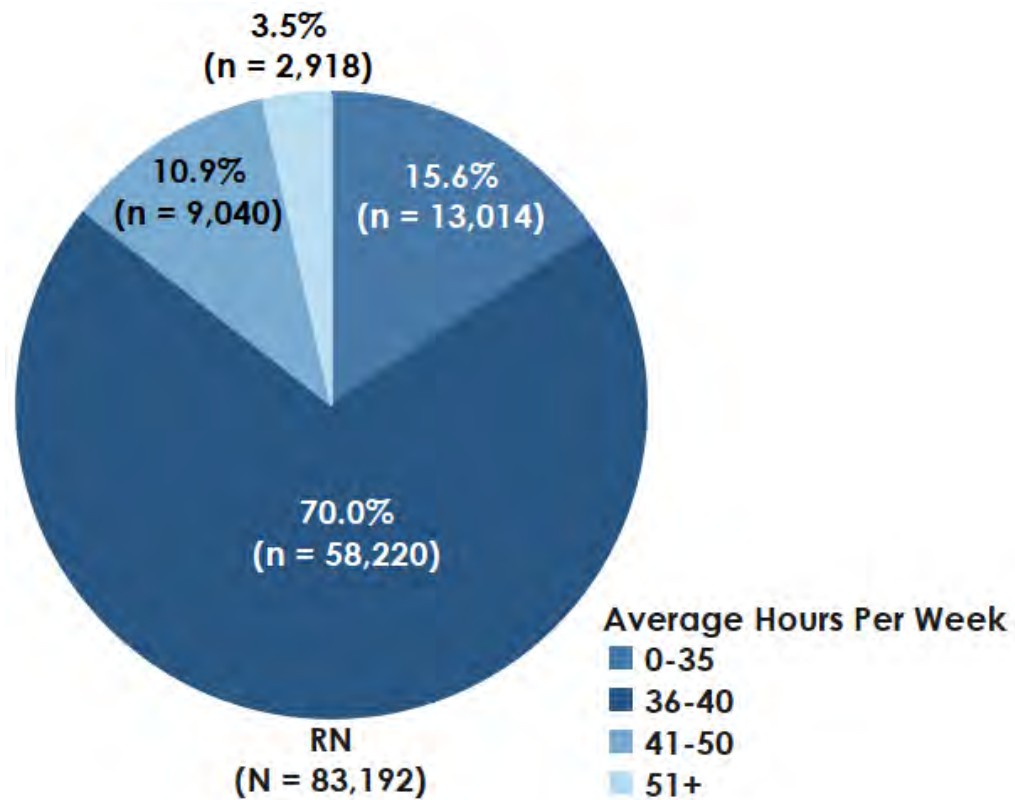
*Figure 32 does not include RNs who did not indicate how many hours they worked (N = 20,756).

The RN workforce typically holds one position (91.6%) as a staff nurse (73.0%) working an average of 36-40 hours per workweek (70.0%).

Figure 33 presents the geographic distribution of RNs by reported employment setting by Missouri's Behavioral Risk Factor Surveillance Survey region (BRFSS).

The aggregation to the region displays the overall Missouri geographic distribution with detailed breakouts by employment setting. Refer to Appendix 2, to view the employment locations disaggregated at the county level.

Figure 33. RN Employment Settings by Missouri Regions
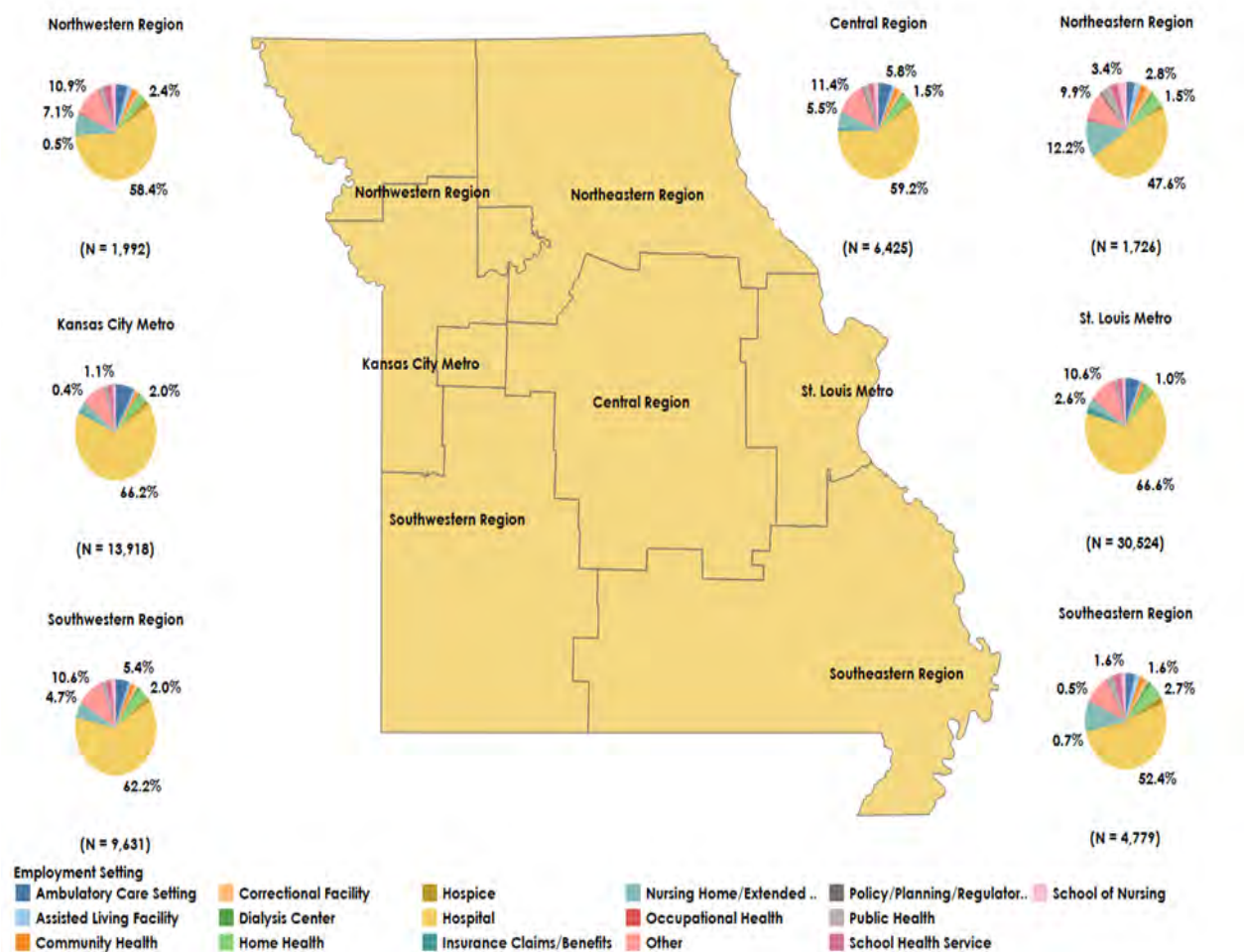
RN Reasons for Unemployment

Figure 34. RN Reasons for unemployment
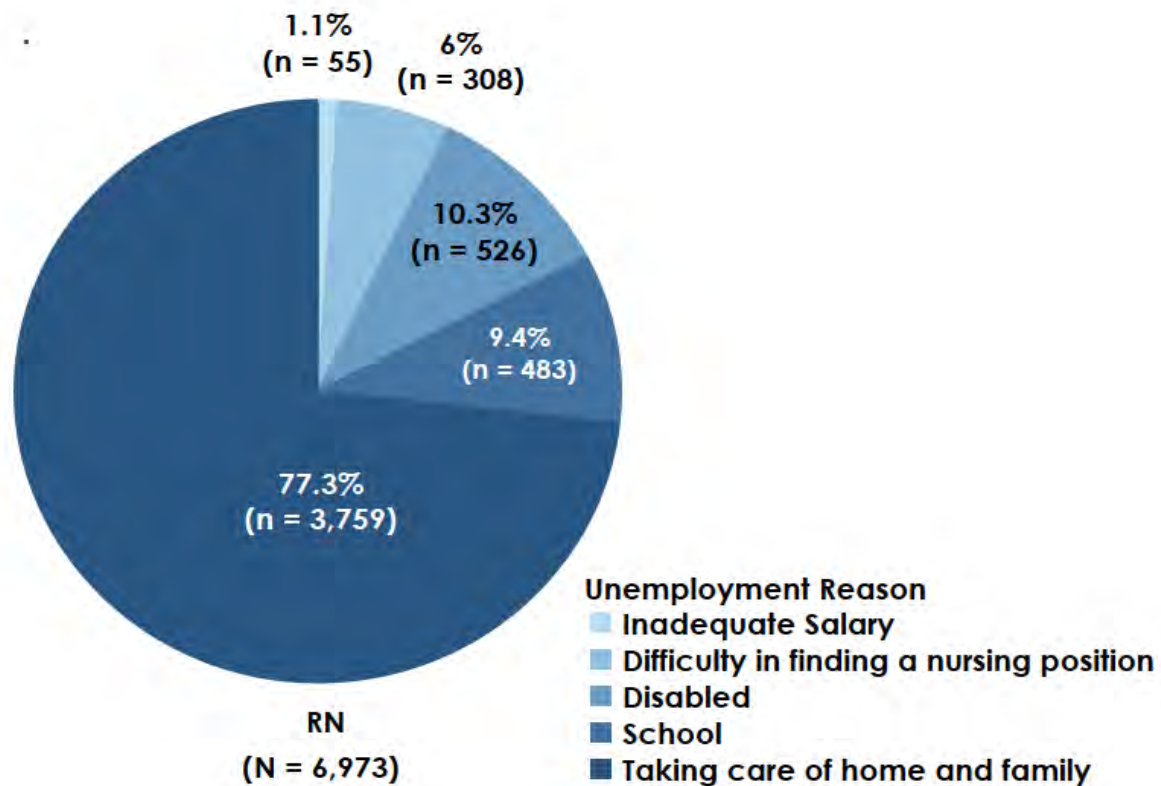
*Figure 34 does not include RNs who did not indicate their reasons for unemployment (N = 218).

Most RNs were unemployed to take care of home and family demonstrating further the challenges faced by the RN workforce.

Programs that mitigate work/life balance challenges may increase employment opportunities for the 77.3% of those currently licensed unemployed nurses taking care of their home and family.

Figure 35 maps the rate of RNs, who reported being unemployed, per population of 10k by the RN's County of residence.

Figure 35. RN County of Residence for Unemployed Nurses
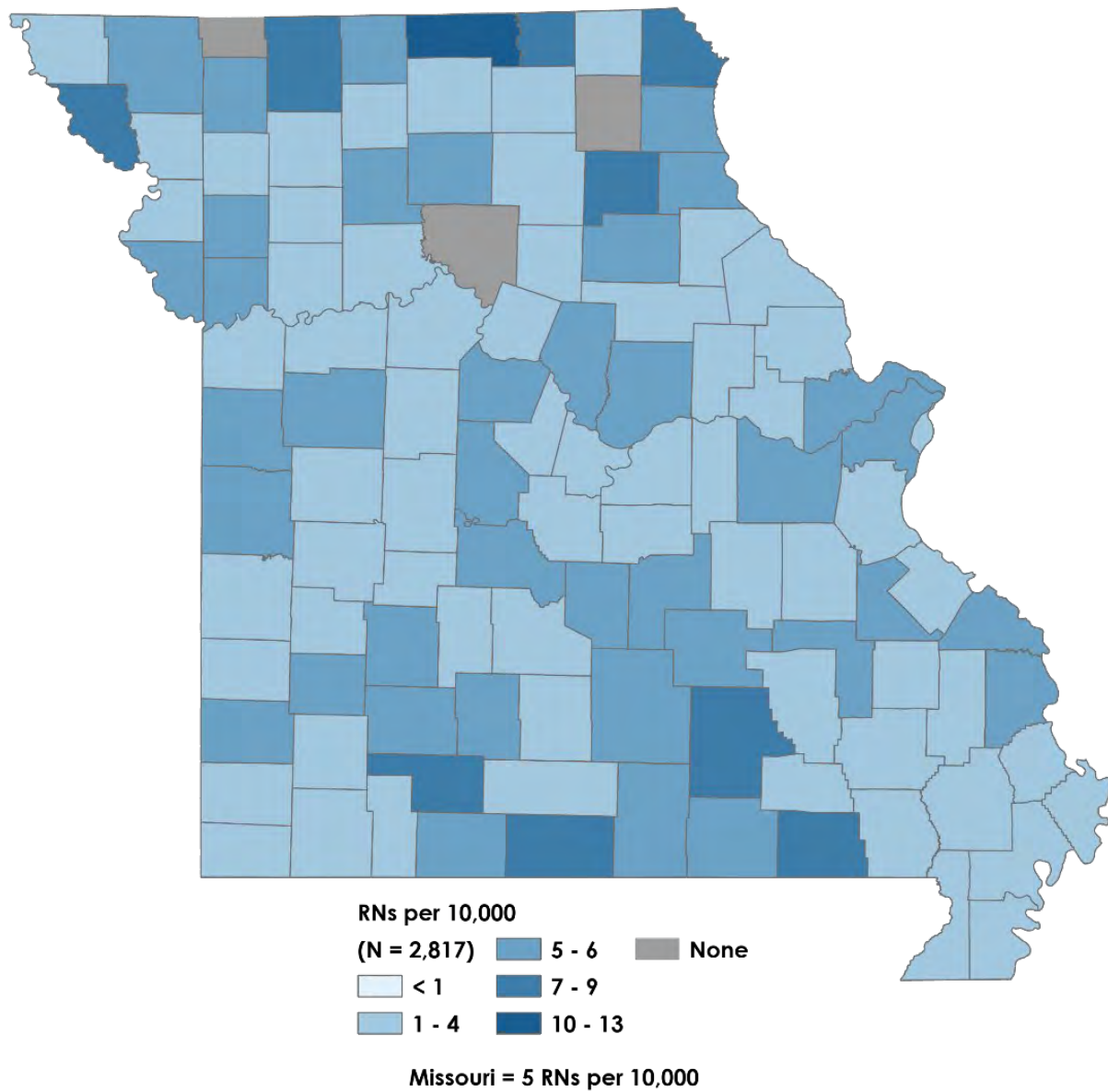
RNs per 10,000
(N = 2,817)

|	
5 - 6	None
< 1	7 - 9
1 - 4	10 - 13

Missouri = 5 RNs per 10,000

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Advanced Practice Registered Nurse (APRN)

APRNs comprised the smallest portion of the nursing population, representing approximately 10% of the Missouri Nursing workforce (13,431 APRNs of the 134,599 total nursing workforce). Most APRNs reported working in inpatient care employment settings (51%) in metropolitan areas.

APRN Demographic Characteristics

APRNs predominately comprised nurses who identified as white (87.8%) females (86.6%) aged 35-44 (36.9%). More APRNs were 54 years and younger compared to those 55 years and older.

APRN Age Characteristics

The mean age of the APRN workforce was 45.5, the median was 43, and the modal age was 38. With more APRNs within preretirement ages and those entering nursing 25-34 (36.9%) compared to those within retirement ages 55-64 (24%).

Figure 36. APRN Age Distribution
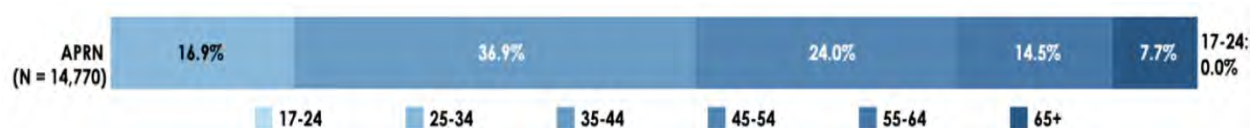
APRN Gender Characteristics

Figure 37. APRN Gender Distribution
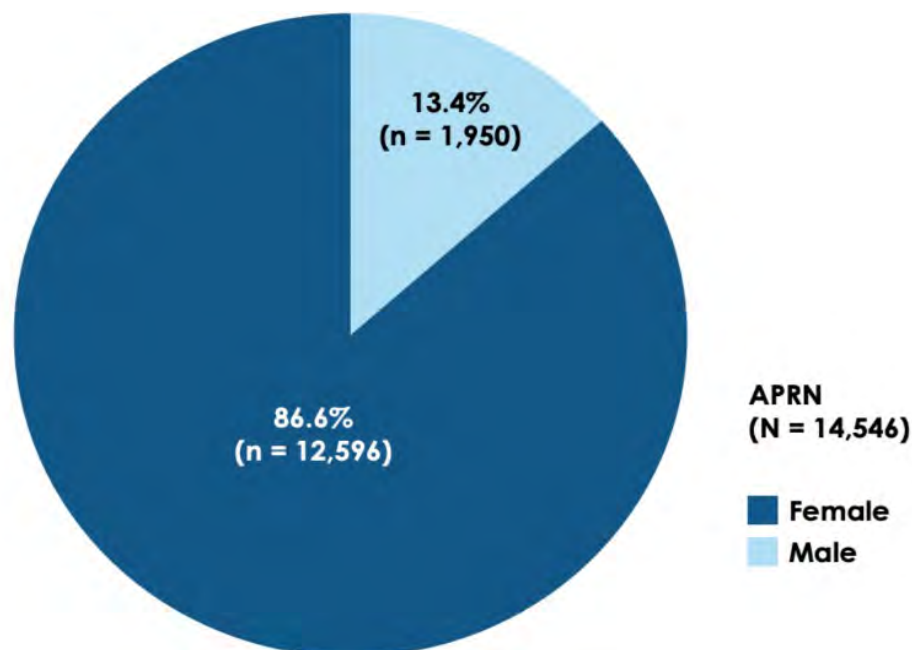
*To protect privacy, data on those reporting as non-binary and who did not answer the question (N = 221) were not included in the analysis demonstrated in figures 37 and 38.

APRN Race and Ethnicity Characteristics

Figure 38. APRNs by Race and Ethnicity

APRN
(N = 14,536)

- American Indian/Alaska Native
- Asian
- Black/African American
- Native Hawaiian/Other Pacific Islander
- White
- Another Race
- Two or More Races

APRN
(N = 14,770)

- Not Hispanic/Latinx
- Hispanic/Latinx
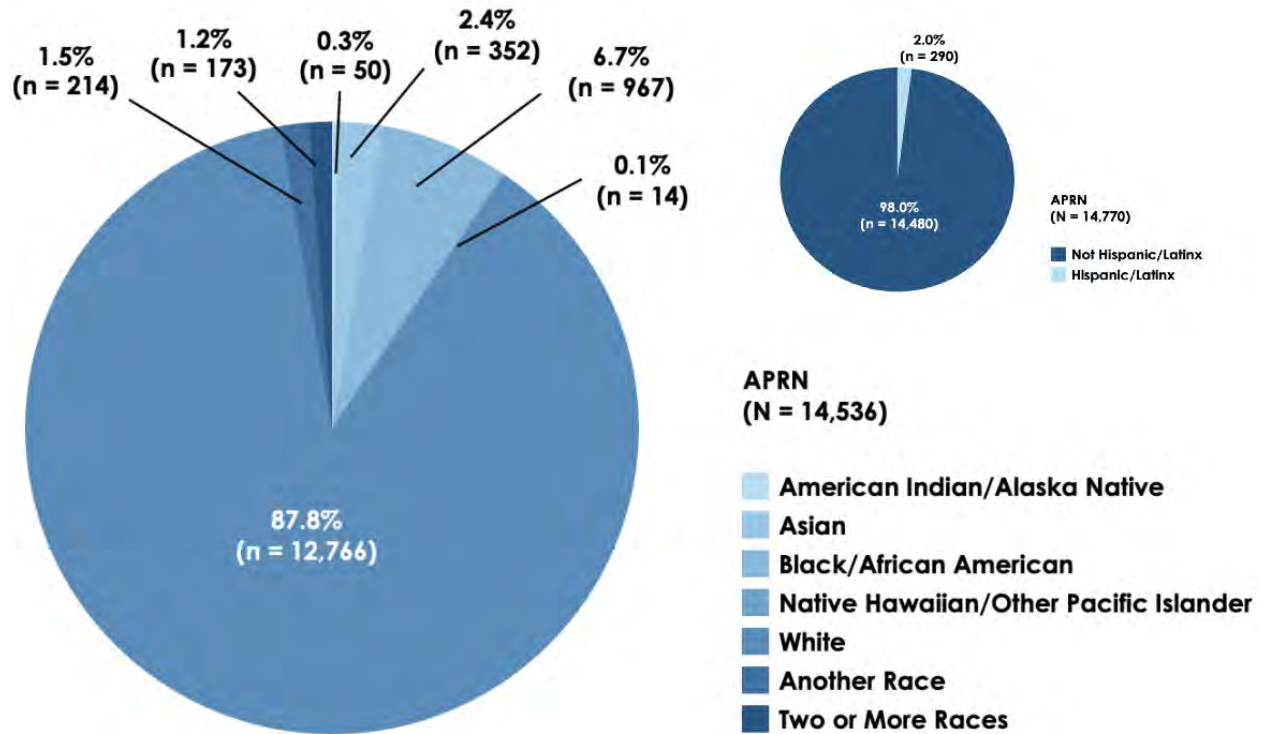
APRN Distribution

Figure 39 represents the total number of APRN licenses (14,770) and not the total number of individual persons who may have multiple licenses (13,431).

Figure 39. APRN License Type Distribution

1.2%
(n = 177)

15.2%
(n = 2,252)

1.6%
(n = 236)

82.0%
(n = 12,105)

APRNs
(N = 14,770)

License Types
CNM
CNP
CNS
CRNA
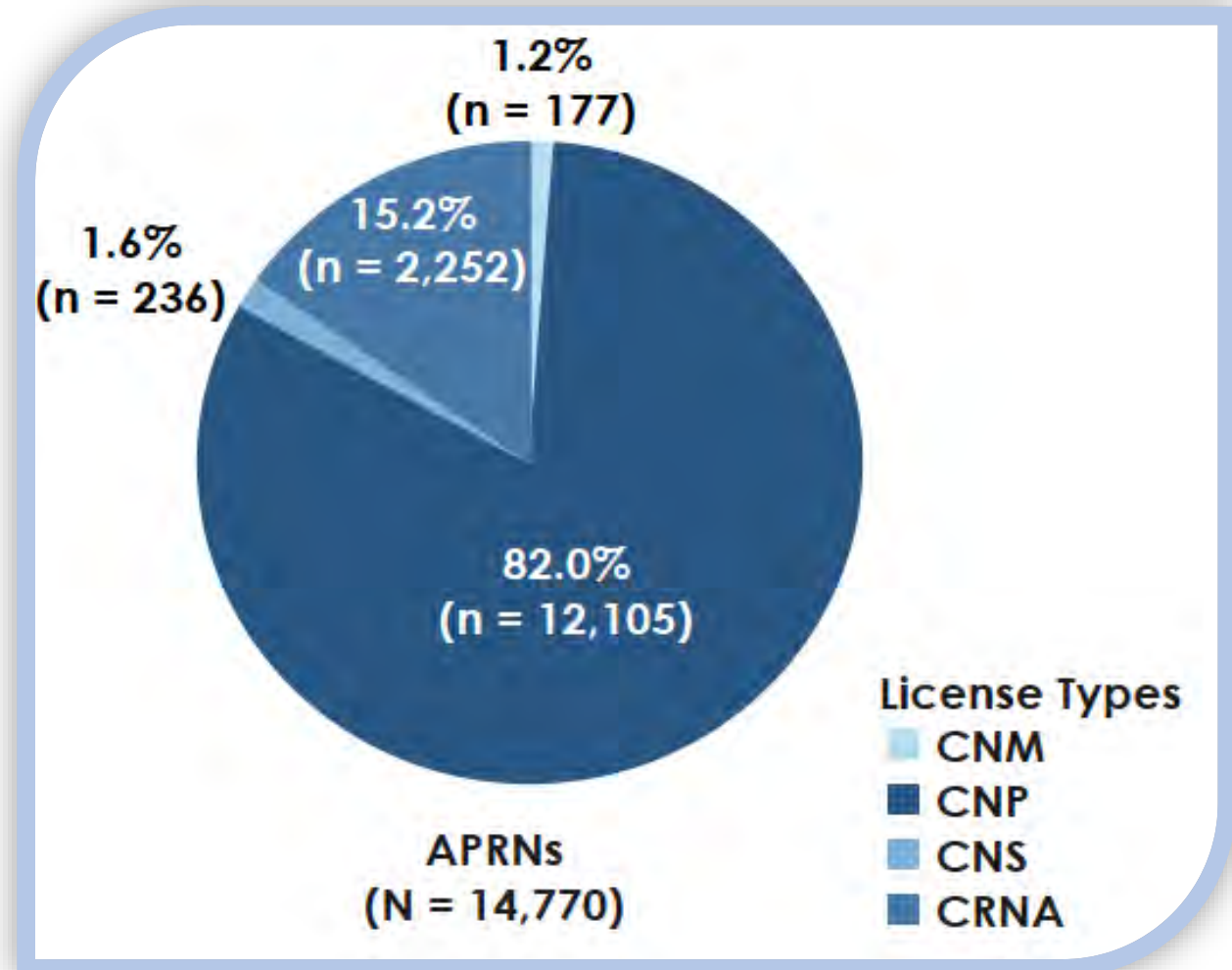
APRN Nurses by Employment County and Employment Setting

Interpreting the APRN workforce age distribution by those APRNs 55 years and older and APRNs 54 years and younger in different employment settings supports significant insights for healthcare stakeholders and policymakers.

Expanded analysis of the workforce by age can assist in resource allocation and guide decisions about training, professional development, and recruitment strategies tailored to each employment setting's specific needs.

Most APRNs were 54 years and younger and held the highest number of positions in all employment settings except policy/planning/regulatory/licensing agencies. However, there were very few nurses employed in those settings demonstrating n < 10 and representing a nominal number of nurses.

Figure 40. Percentage of APRNs 55 Years and Older Employment Setting
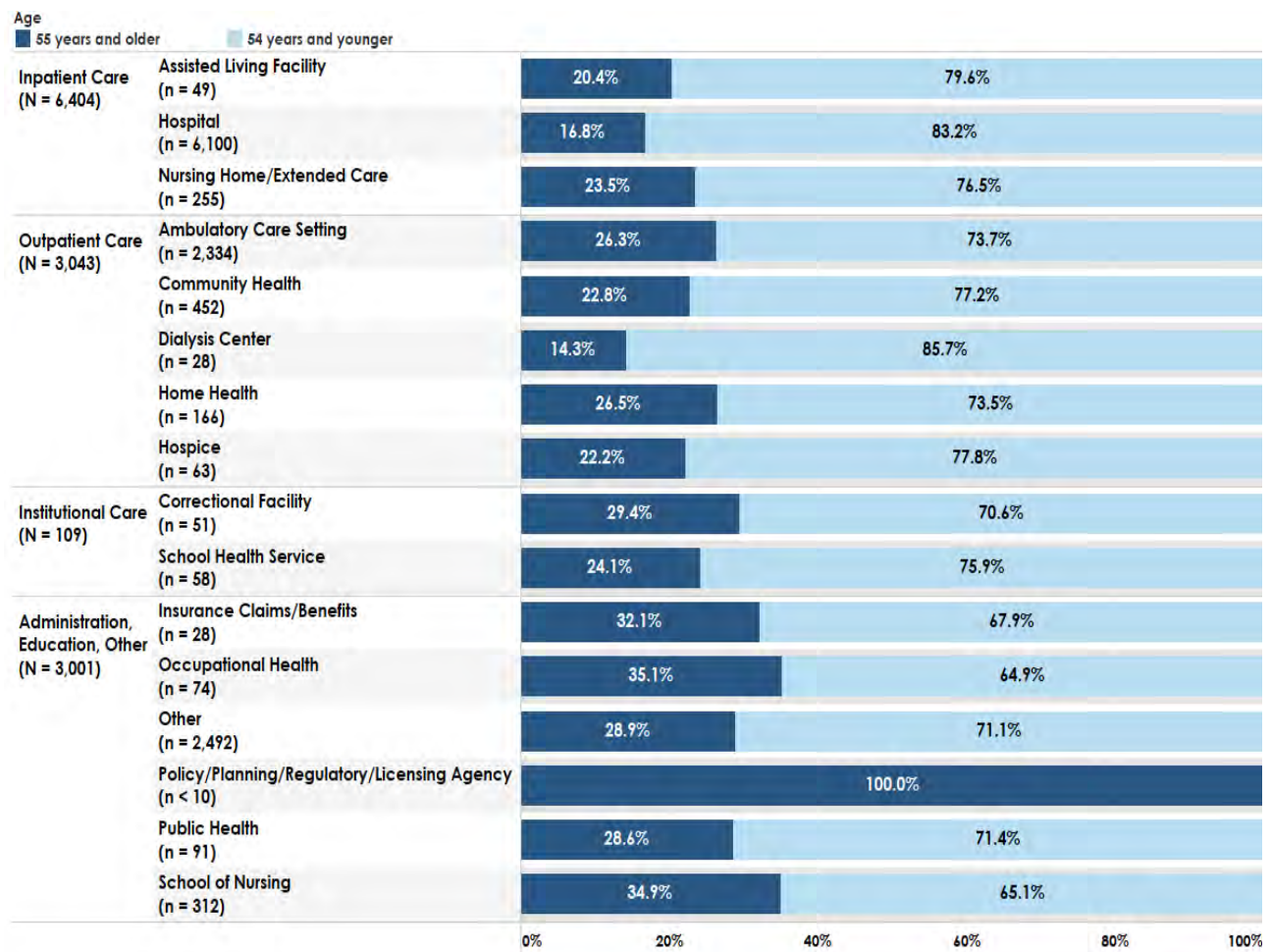
*Figure 40 does not include APRNs who did not report their employment setting (N = 80).

Figure 41 maps the percentage of APRNs 55 years and older by employment county per population of 10k, demonstrating no practicing APRNs employed in Mercer County 55 years and older, and of any age as exhibited in 'Figure 46. APRN Employment Location by County (County of Employment).'

Percent of APRNs 55 Years and Older

(n = 2,075, N = 9,427)   ▢ 27% - 45%   ▢ None

▢ 0%   ▢ 46% - 49%

▢ 1% - 26%   ▣ 50% - 100%
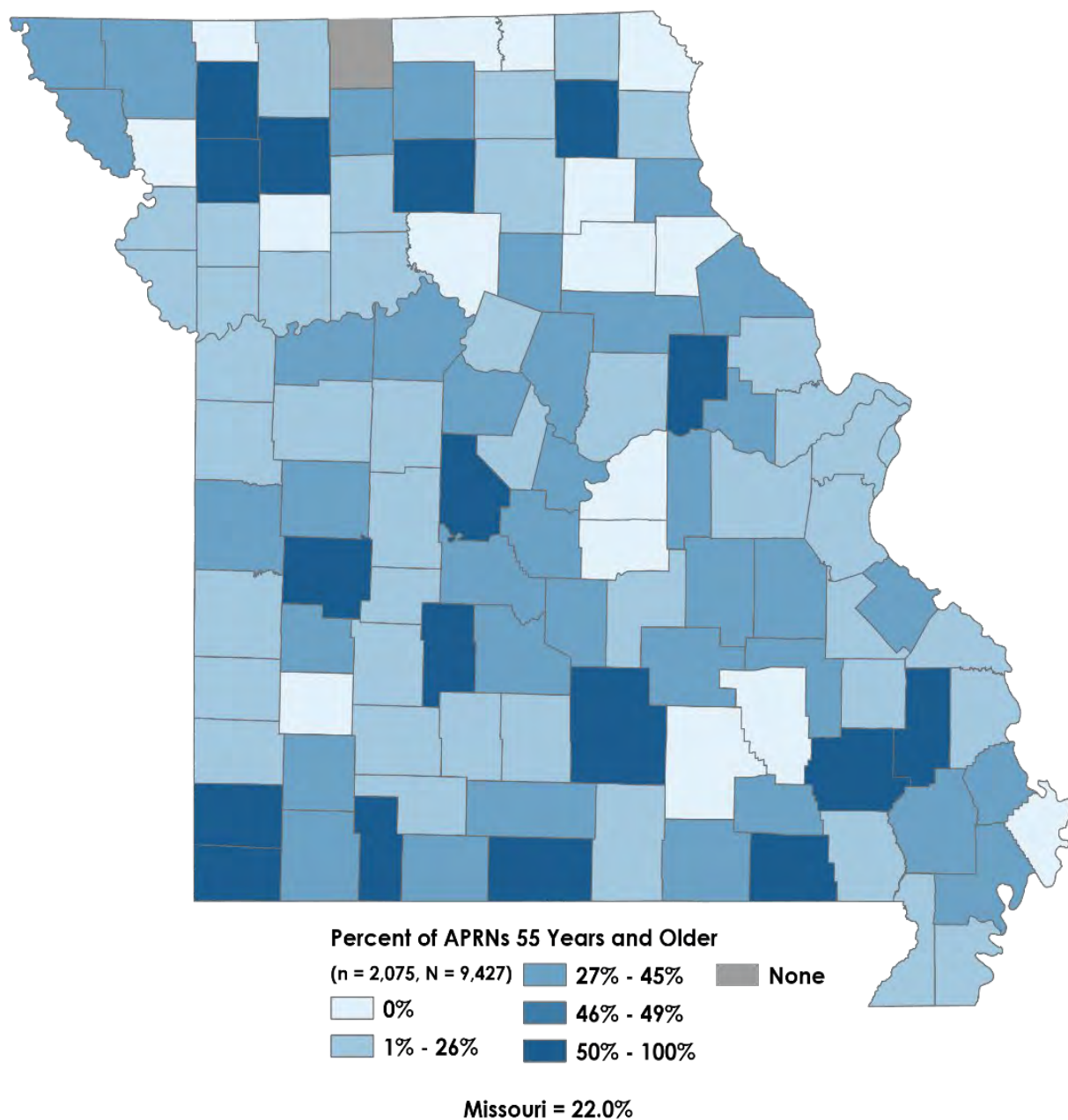
Missouri = 22.0%

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023

APRN Education Characteristics

The majority of APRNs reported a MSN (79.5%) as their highest education level and 1.6% earned their DNP or PhD. Respondents may have erroneously selected LPN as their highest degree as a plausible consequence of the 0.1% reporting LPN or 0.8% reporting nursing diploma as their highest education level.

Figure 42. APRN Education Starting Education and Highest Education Level

Education Level	Degree Type	
Starting Education Level (N = 8,187)	LPN/VN Certificate (n = 416)	5.1%
	Nursing Diploma (n = 334)	4.1%
	Nursing Associate's Degree (n = 1,342)	16.4%
	Nursing Baccalaureate Degree (n = 4,021)	49.1%
	Nursing Master's Degree (n = 1,853)	22.6%
	Nursing Doctoral Degree - DNP, PhD (n = 221)	2.7%
Highest Education Level (N = 13,395)	LPN/VN Certificate (n = 17)	0.1%
	Nursing Diploma (n = 106)	0.8%
	Nursing Associate's Degree (n = 182)	1.4%
	Nursing Baccalaureate Degree (n = 2,217)	16.6%
	Nursing Master's Degree (n = 10,652)	79.5%
	Nursing Doctoral Degree - DNP, PhD (n = 221)	1.6%

*Figure 42 does not include the APRNs who did not indicate a starting (N = 6,583) or highest education (N = 1,376).

APRN Employment Characteristics

Figure 43. APRN Employment Group Type Employment Setting

23.9%
(n = 3,001)

0.9%
(n = 109)

51.0%
(n = 6,404)

24.2%
(n = 3,043)

APRN
(N = 12,557)

Primary Employment Group Type
- Inpatient
- Outpatient
- Institutional
- Administration, Education & Other
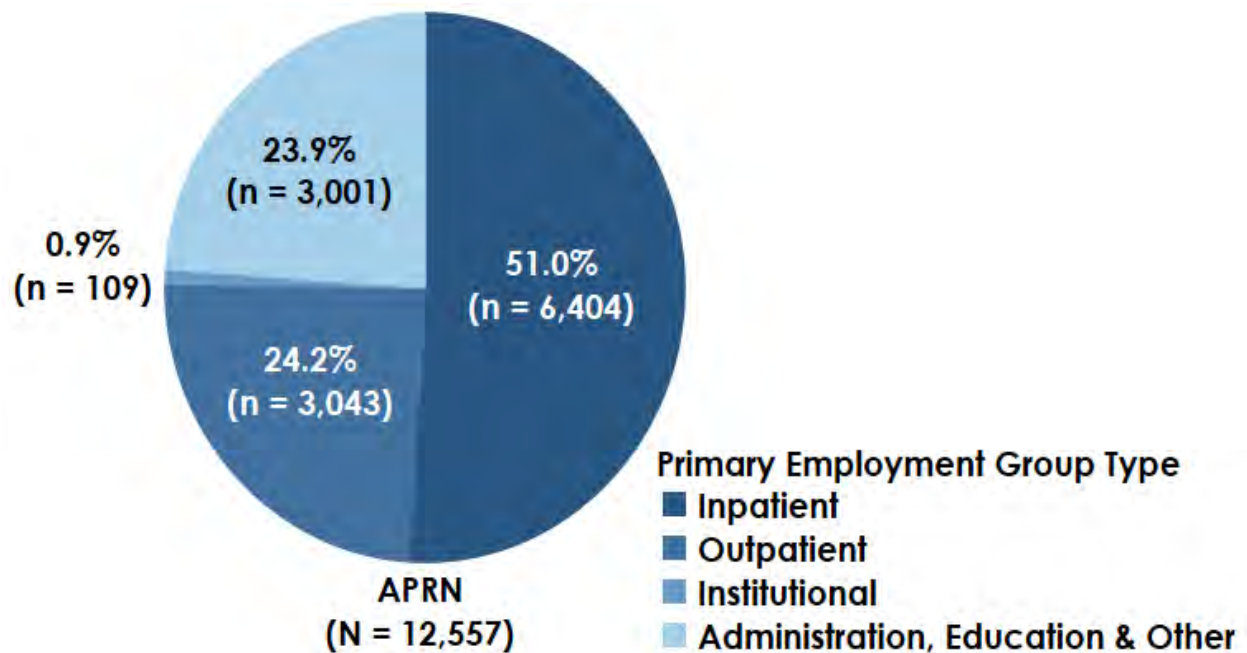
*Figures 43 and 44 do not include APRNs who did not indicate their primary employment setting groups (N = 2,213).

APRN Employment Setting

APRNs worked in hospital inpatient employment settings most frequently.

Very few APRNs were distributed across employment settings and extremely small percentages reported practicing in institutional settings (0.9%), with the highest rates demonstrated in inpatient hospitals (48.6%), outpatient ambulatory care (18.6%), and other administrative unspecified as other employment settings (19.8%).

Figure 44. APRN Employment Settings

Employment Group	Employment Setting	Percentage
Inpatient (N = 6,404)	Hospital (n = 6,100)	48.6%
	Nursing Home/Extended Care (n = 255)	2.0%
	Assisted Living Facility (n = 49)	0.4%
Outpatient (N = 3,043)	Ambulatory Care (n = 2,334)	18.6%
	Community Health (n = 452)	3.6%
	Dialysis Center (n = 28)	0.2%
	Home Health (n = 166)	1.3%
	Hospice (n = 63)	0.5%
Institutional (N = 109)	Correctional Facility (n = 51)	0.4%
	School Health Service (n = 58)	0.5%
Administration, Education, & Other (N = 3,001)	Insurance Claims/Benefits (n = 28)	0.2%
	Occupational Health (n = 74)	0.6%
	Policy/Planning/Regulatory/Licensing Agency	
	Public Health (n = 91)	0.7%
	School of Nursing (n = 312)	2.5%
	Other (n = 2,492)	19.8%

APRN Employment Specialty

Consistent with the employment setting analysis, the majority of APRNs reported 'anesthesia' (15.0%), 'family health' (12.4%), and 'acute/critical care' (11.1%) most often as their employment specialty.

Approximately 0.7% of APRNs specialized in 'public health', while roughly 4.9% specialized in 'mental/behavioral health' care. *Figure 45 does not include the APRNs who did not indicate an employment specialty (N = 3,278).

Figure 45. APRN Employment Specialty

Specialty	Percentage
Acute Care/Critical Care (n = 1,278)	11.1%
Adult Health (n = 616)	5.4%
Anesthesia (n = 1,727)	15.0%
Cardiology (n = 497)	4.3%
Community (n = 62)	0.5%
Emergency/Trauma (n = 755)	6.6%
Family Health (n = 1,429)	12.4%
Geriatric/Gerontology (n = 340)	3.0%
Home Health (n = 85)	0.7%
Maternal-Child Health/Obstetrics (n = 231)	2.0%
Medical Surgical (n = 356)	3.1%
Neonatal (n = 324)	2.8%
Nephrology (n = 78)	0.7%
Occupational Health (n = 69)	0.6%
Oncology (n = 332)	2.9%
Palliative Care/Hospice (n = 118)	1.0%
Pediatrics (n = 872)	7.6%
Perioperative (n = 162)	1.4%
MH/BH (n = 566)	4.9%
Public Health (n = 34)	0.3%
Rehabilitation (n = 60)	0.5%
School Health (n = 30)	0.3%
Women's Health (n = 358)	3.1%
Other - Clinical Specialties (n = 1,032)	9.0%
Other - Non-Clinical Specialties (n = 81)	0.7%

(N = 11,492)

Figure 46 maps the rates of the nursing workforce employed in a county with an APRN license, ranging from 0 per 10k in Mercer County to 48 per 10k in St. Louis City.

Figure 46. APRN Employment Location by County (County of Employment)
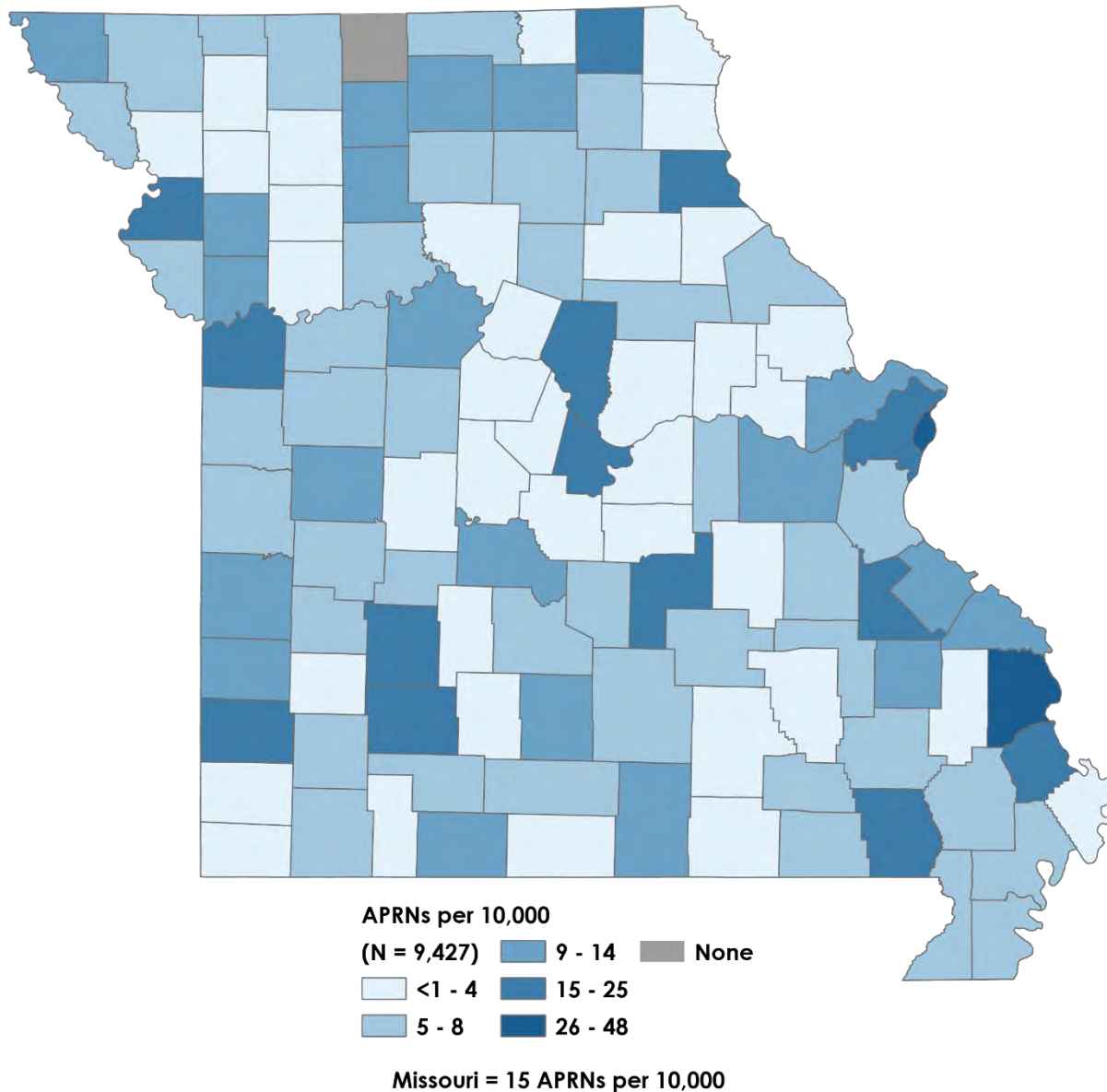
APRNs per 10,000
(N = 9,427)   9 - 14   None
              <1 - 4   15 - 25
              5 - 8   26 - 48

Missouri = 15 APRNs per 10,000

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Figure 47. APRN Employment Setting Group by County as a Rate per 10K

APRNs in Inpatient Setting
(N = 4,909) [ ] 2 - 5   [ ] 11 - 18   [ ] None
[ ] <1 - 1   [ ] 6 - 10   [ ] 19 - 35

Inpatient setting includes Hospital, Assisted Living Facility
and Nursing Home/Extended Care

APRNs in Outpatent Setting
(N = 2,253) [ ] 2   [ ] 4 - 5   [ ] None
[ ] <1 - 1   [ ] 3   [ ] 6 - 8

Outpatient setting includes Ambulatory Care, Home Health,
Community Health, Dialysis Center, Hospice
and Physician's Office/Primary Care

APRNs in Admin, Education, Other Setting
(N = 2,161) [ ] 2 - 3   [ ] 6 - 7   [ ] None
[ ] <1 - 1   [ ] 4 - 5   [ ] 8 - 9

Admin, Education, Other Setting includes Public Health,
Occupational Health, Insurance Claims/Benefits,
Policy/Planning/Regulatory/Licensing Agency,
School of Nursing and Other

APRNs in Institutional Setting
(N = 79) [ ] 1   [ ] None
[ ] < 1

Institutional Setting includes Correctional Facility
and School Health Service

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Figure 49 identifies APRNs' responses to the Nursys survey question asking them to report their position title in their primary position.

Figure 48. APRN Number of Positions Held

License Type
APRN
(n = 12,599)

One	Two	Three
83.0%	13.7%	3.3%

■ One   ■ Two   ■ Three
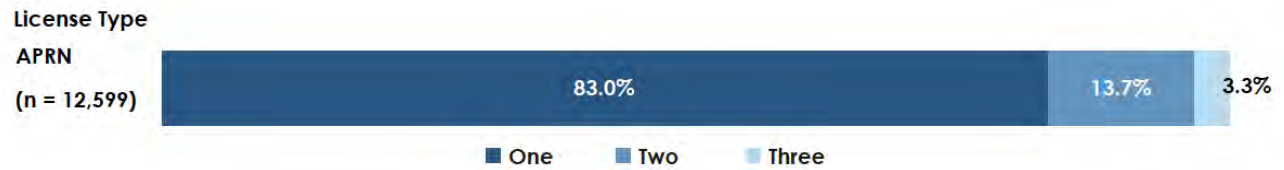
*Figure 48 does not include the APRNs who did not indicate how many positions they hold (N = 2,171).

Figure 49. Position Description of APRNs

Position	Percent
Advanced Practice Nurse (n = 9,066)	72.2%
Staff Nurse (n = 2,689)	21.4%
Nurse Manager (n = 119)	0.9%
Nurse Researcher (n = 24)	0.2%
Nurse Faculty (n = 221)	1.8%
Other - Health Related (n = 267)	2.1%
Nursing Consultant (n = 23)	0.2%
Nurse Executive (n = 70)	0.6%
Other - Not Health Related (n < 10)	0.1%
Case Manager (n = 73)	0.6%

(N = 12,560)

APRN Average Hours

Figure 50. APRN Average Hours Working Per Week

5.4%
(n = 681)

19.0%
(n = 2,395)

16.4%
(n = 2,071)

59.1%
(n = 7,452)

APRN
(N = 12,599)

Average Hours Per Week
- 0-35
- 36-40
- 41-50
- 51+
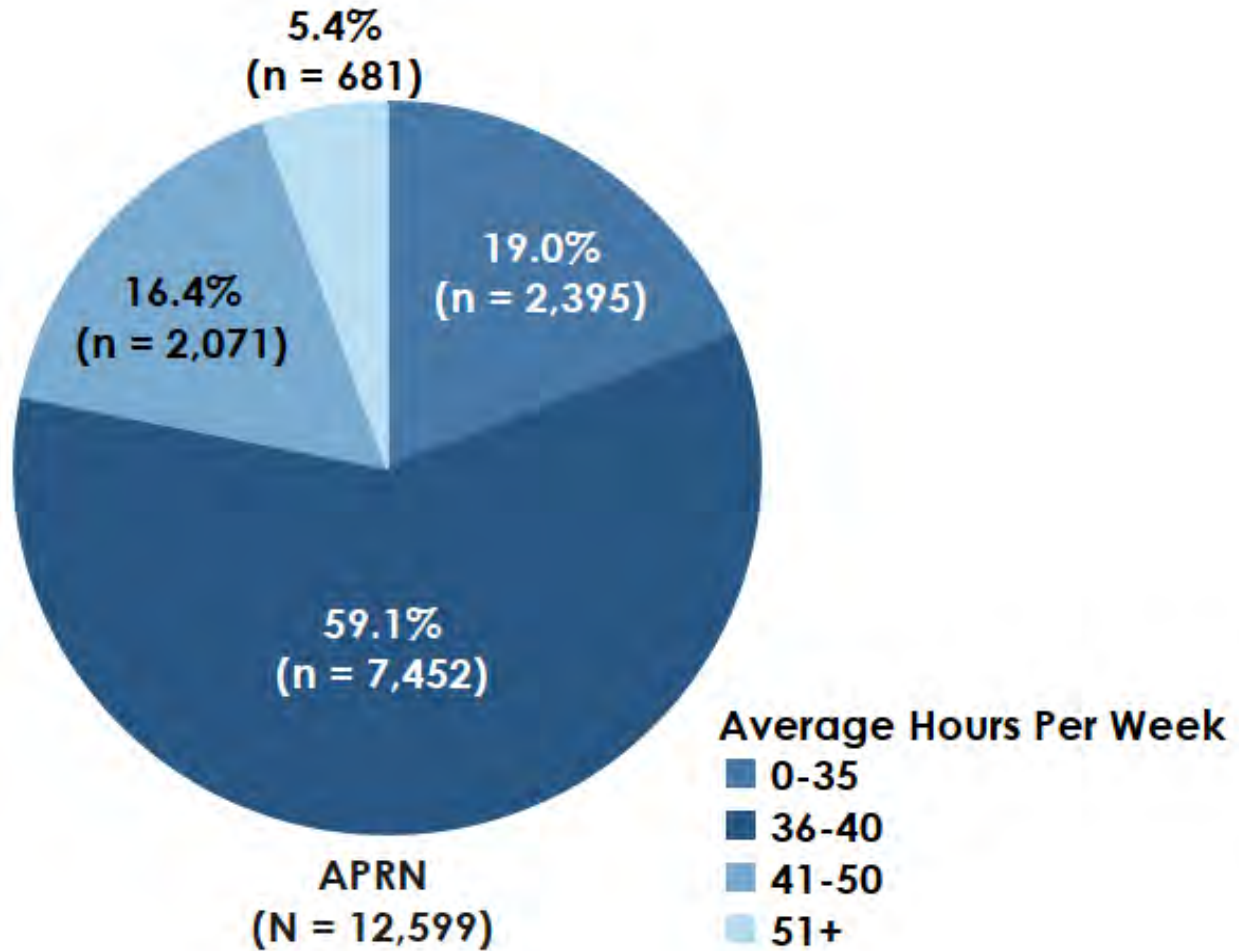
* Figure 50 does not include APRNs who did not indicate how many hours they worked per week (N = 2,171).

The APRN workforce typically holds one position (83%) in an Advanced Practice Nurse position (72.2%) working an average of 36-40 hours per workweek (59.1%).

Figure 51 presents the geographic distribution of APRNs by reported employment setting by Missouri's Behavioral Risk Factor Surveillance Survey region (BRFSS).

The aggregation to the region displays the overall Missouri geographic distribution with detailed breakouts by employment setting. Refer to Appendix 2, to view the employment locations disaggregated at the county level.

Figure 51. APRN Employment Settings by Missouri Regions
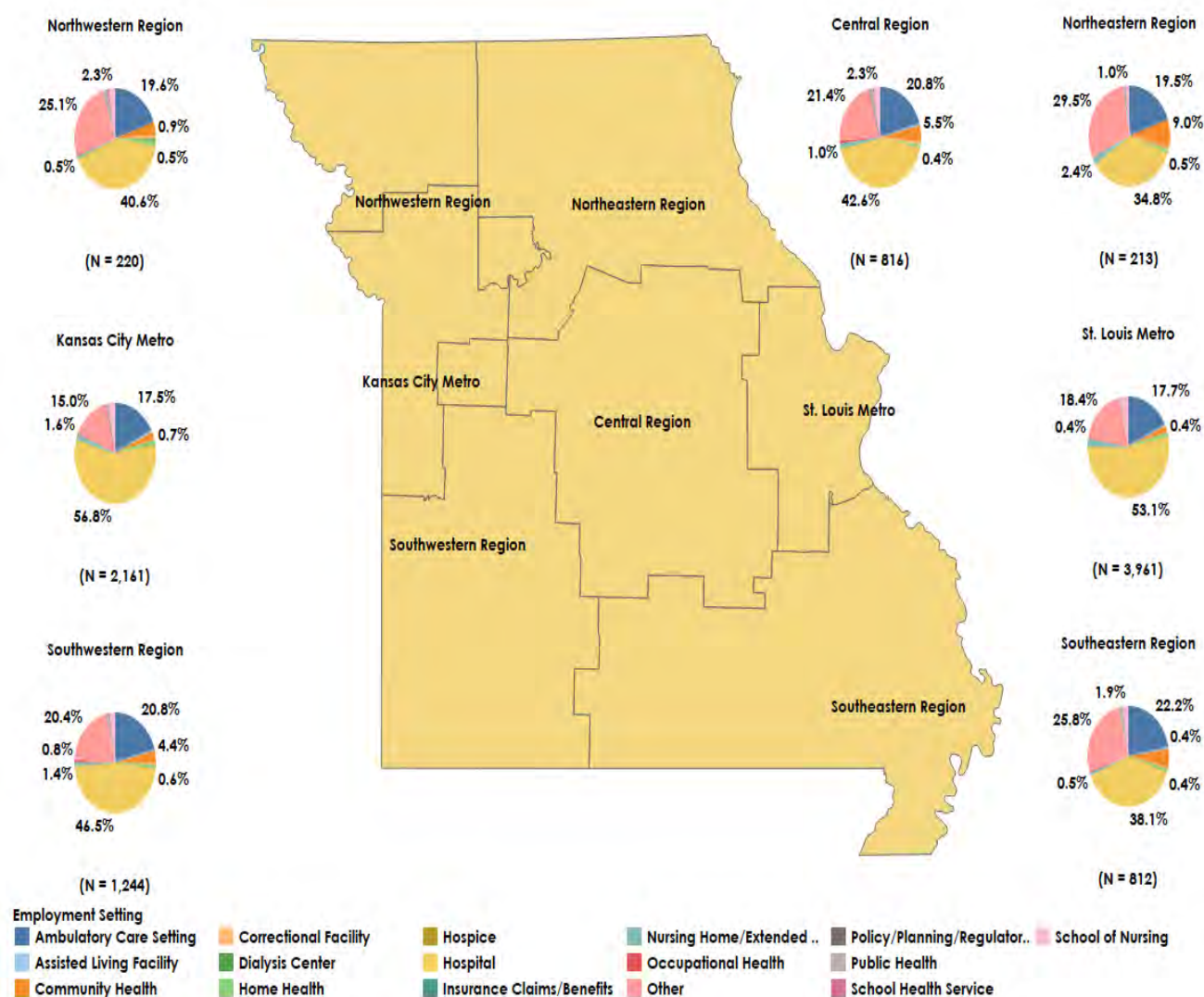
APRN Reasons for Unemployment

Figure 52. APRN Reasons for Unemployment

0.3%
(n = 1)

3%
(n = 11)

8.4%
(n = 31)

35.8%
(n = 132)

52.6%
(n = 194)

APRN
(N = 514)

Unemployment Reason
- Inadequate Salary
- Difficulty in finding a nursing position
- Disabled
- School
- Taking care of home and family
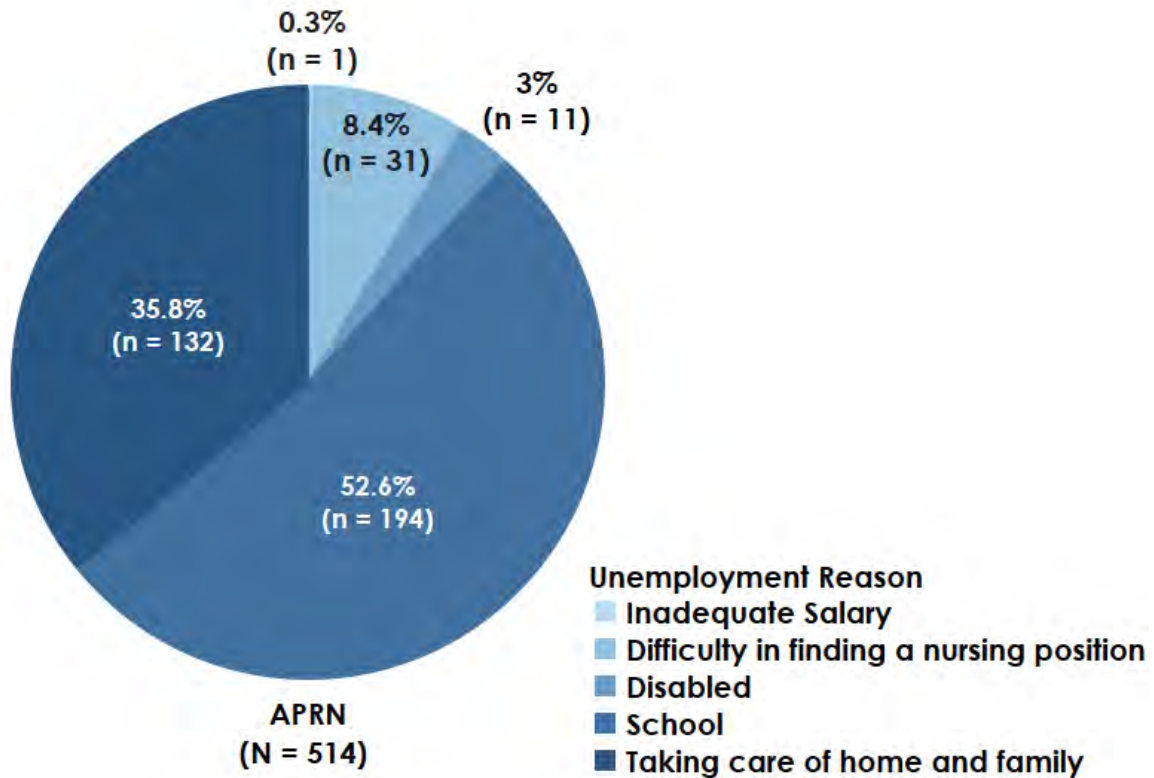
*Figures 52 and 53 do not include 'N/A' responses (N = 12) and (N = 133) who chose 'other' reasons for unemployment.

More than half of the APRNs were unemployed to attend school followed by taking care of home and family.

This demonstrates more than 270 licensed nurses who are pursuing some sort of educational opportunity to join the workforce and approximately 184 APRNs with the potential to join the workforce may have the ability to obtain gainful employment if taking care of their home and family was mitigated with balancing employment.

Figure 53 maps the rate of the nursing workforce reporting being unemployed per population of 10k by their county of residence.

Figure 53. APRN County of Residence for Unemployed Nurses
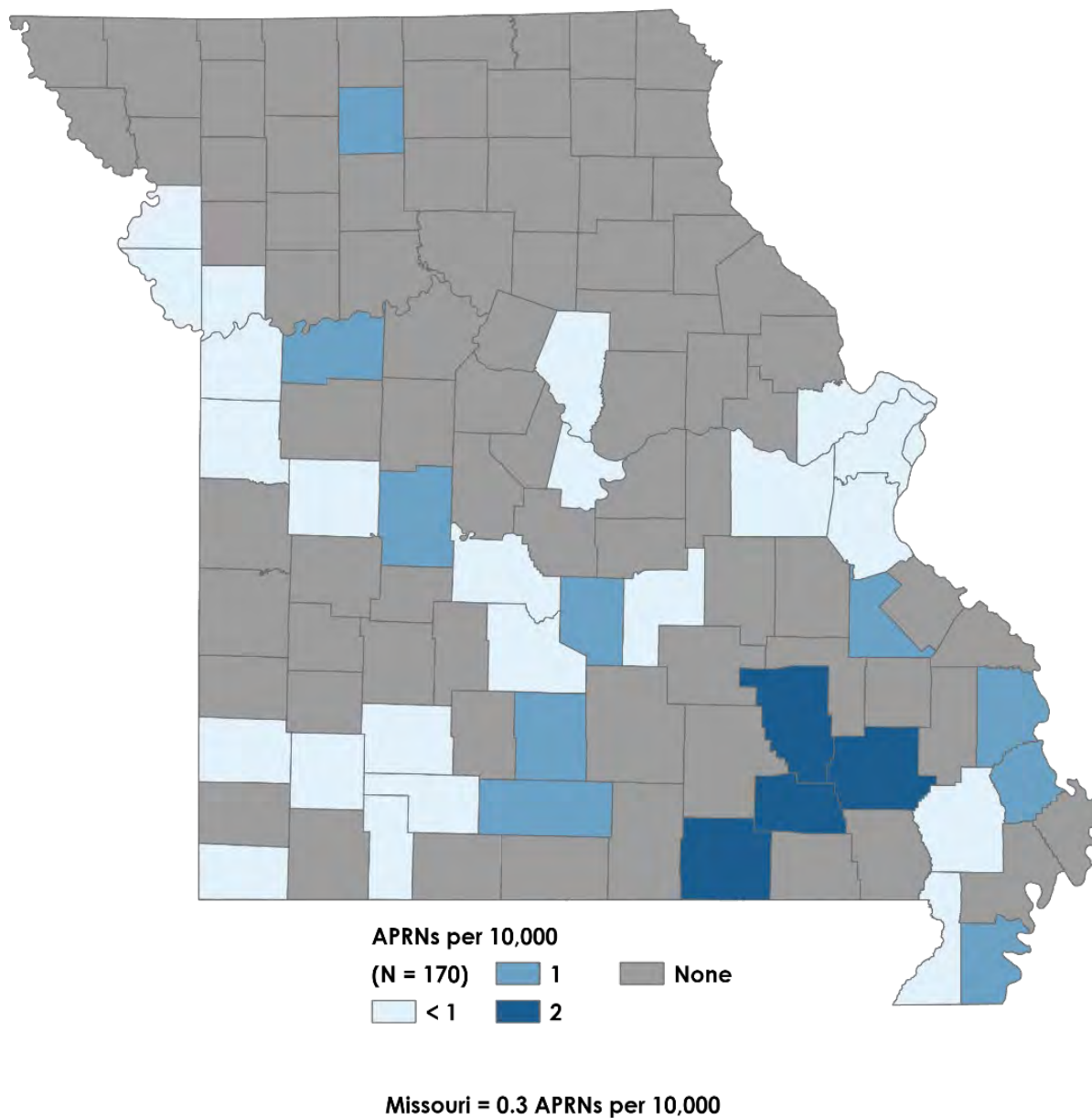
APRNs per 10,000
(N = 170)   1
< 1   2   None

Missouri = 0.3 APRNs per 10,000

Created by: Center for Health Policy, University of Missouri
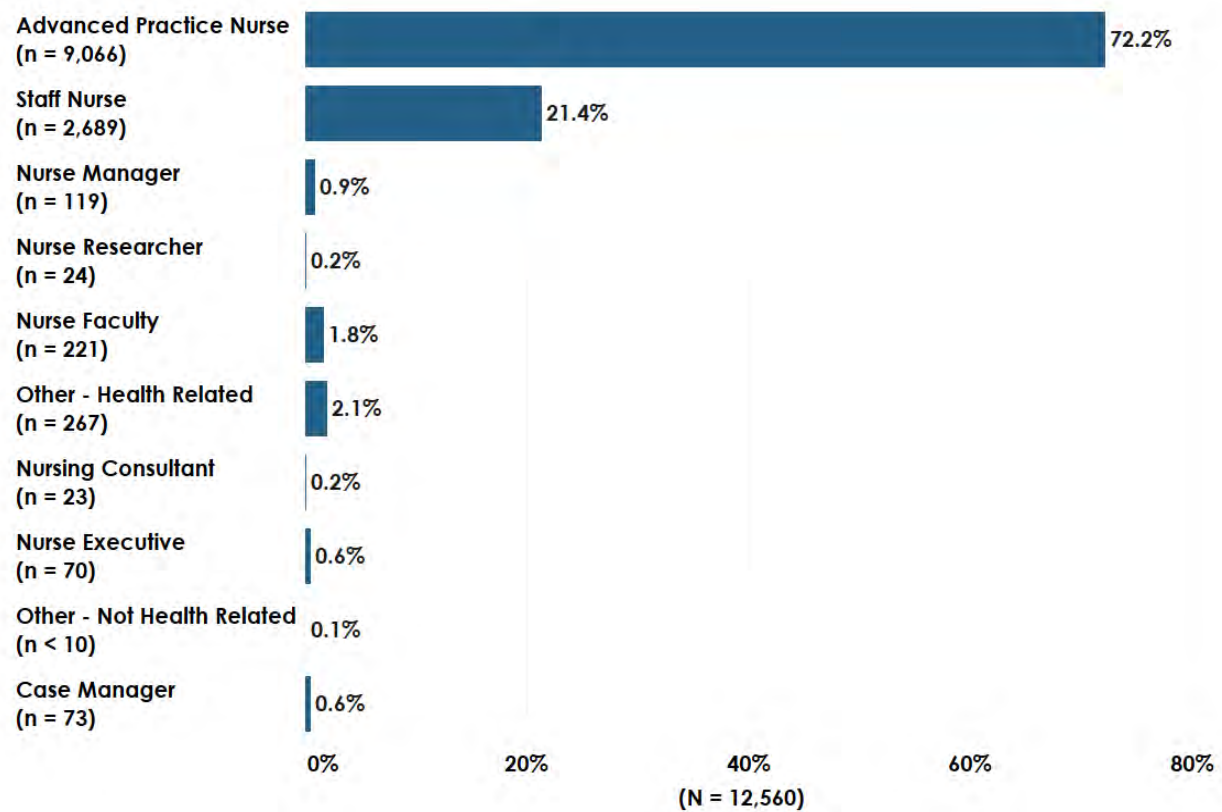Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

APRN Certified Nurse Practitioner (CNP)

The CNP workforce comprised 82% of the total APRN workforce, a significantly higher rate than the other advanced certifications (10,143 total CNPs out of the 13,431 APRNs) and (7.5% of the total Missouri nursing workforce [134,599]). The majority of CNPs were white (87.1%) females (91.6%).

CNP Demographic Characteristics

The CNPs were mostly comprised of nurses ages 35-44 (38.1%) and 45-54 (23.9%).

> **NOTE:** Due to multiple data sets resulting in n < 10, the Black, Indigenous, and People of Color (BIPOC) population categories demonstrated in Figures 56, 68, 80, 92, 105, 121, 134, and 146 are indicative of the following races: American Indian/Alaskan Native, Asian, Black, American, Native Hawaiian/Other Islander, Another Race, and Two or More Races.

CNP Age Characteristics

The mean age of the CNP workforce was 48 years, and the modal age was 38. With more CNPs 55-64 (23.9%) within retirement ages compared to those entering nursing 25-34 (18.3%).

Figure 54. CNP Age Distribution
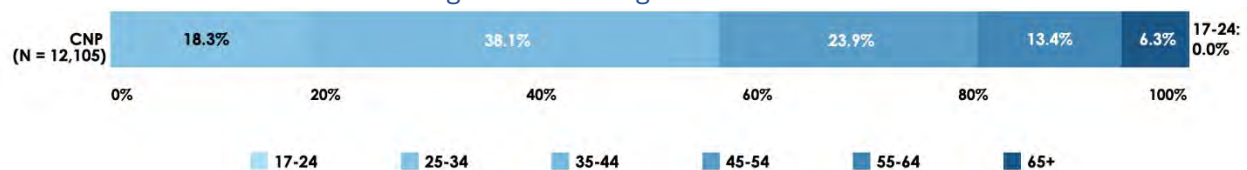
CNP Gender Characteristics and Race and Ethnicity Characteristics

Figure 55. CNP Gender
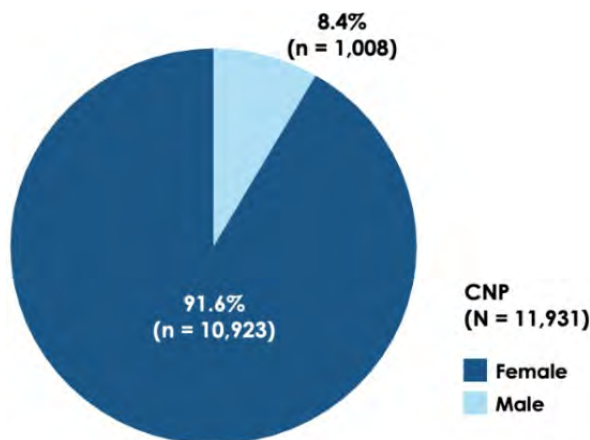
Figure 56. CNP by Race and Ethnicity
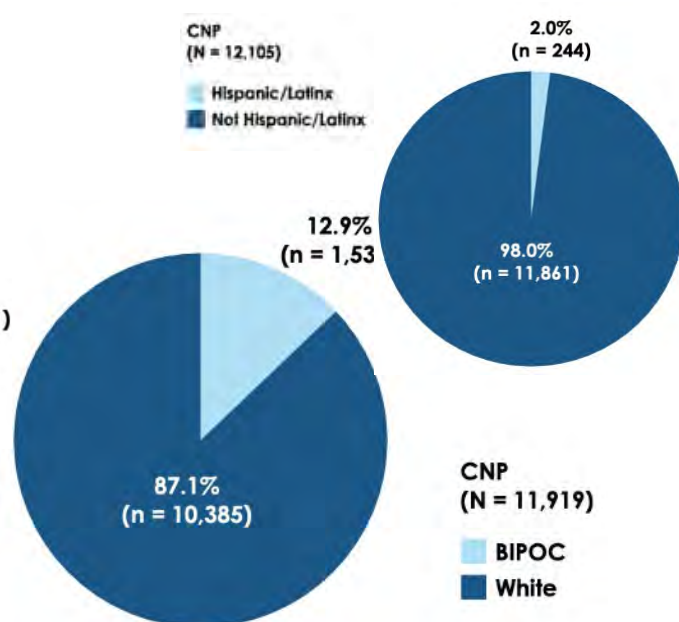
*To protect privacy, data on those identifying as non-binary and who did not answer the question in figures 54, 55, 56 (n = 173), 66, 67, and figures 68 and 78 (n = 44) were not included in the analysis.

The majority of the CNPs 55 years and older were employed in hospital settings and ambulatory care with those 54 years and older holding more positions comparatively. Even though figure 57 illustrates that there was only one setting 'policy/planning/regulatory/licensing agency' those 55 years and older held all the positions, there were very few (n < 10) CNPs employed in that setting.

Figure 57. Percentage of CNPs 55 Years and Older by Employment Setting
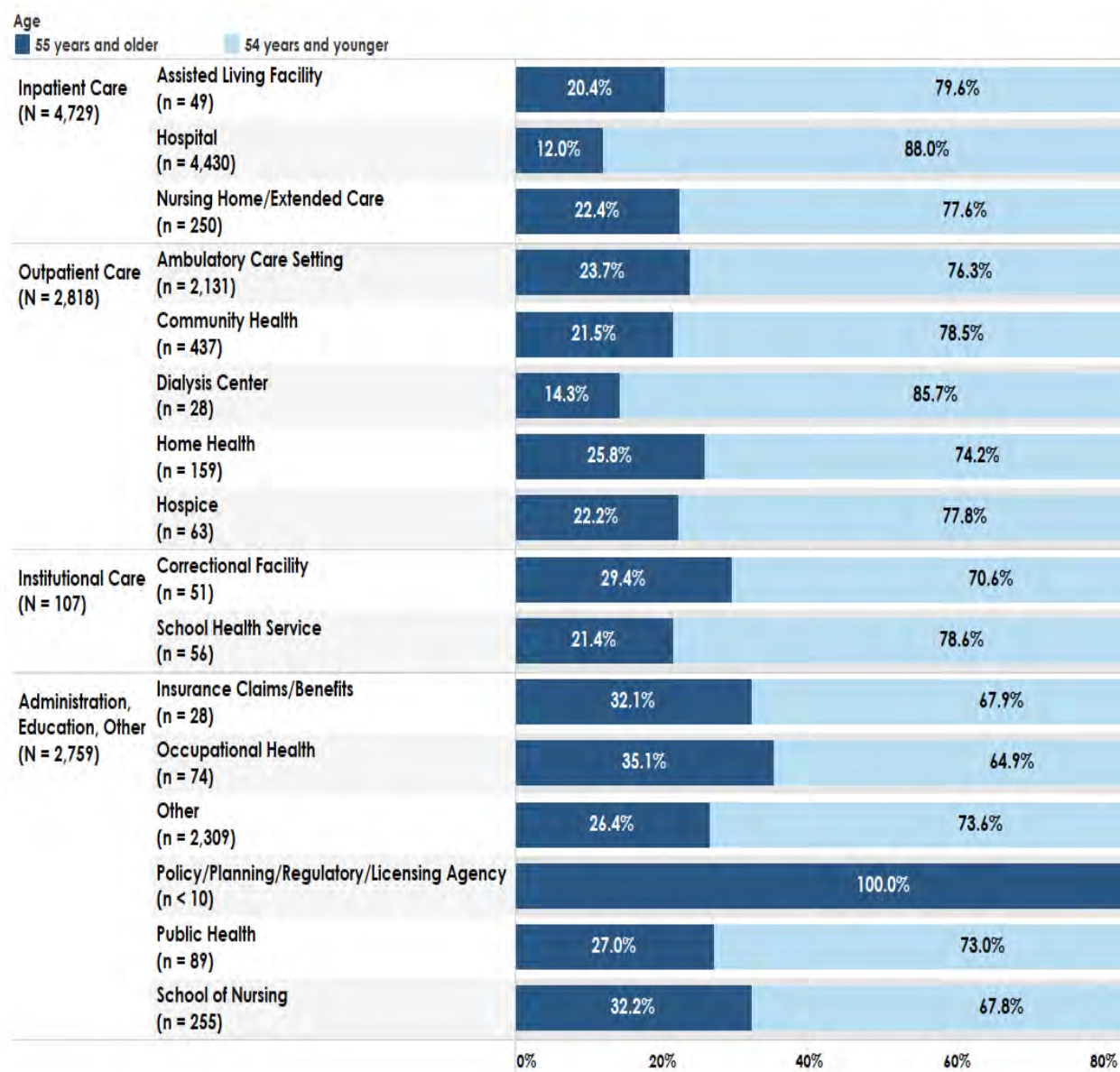
CNP Employment Characteristics

CNPs were predominately employed in inpatient settings (45.4%) of which approximately 94% of those CNPs were employed in hospital settings, representing 42.5% of the total CNP population.

CNP Employment Characteristics and Setting

Figure 58. CNP Employment Setting by Type of Setting

26.5%
(n = 2,759)

45.4%
(n = 4,728)

1.0%
(n = 107)

27.1%
(n = 2,818)

CNP
(N = 10,413)

Employment Setting Group
- Inpatient
- Outpatient
- Institutional
- Administration, Education & Other
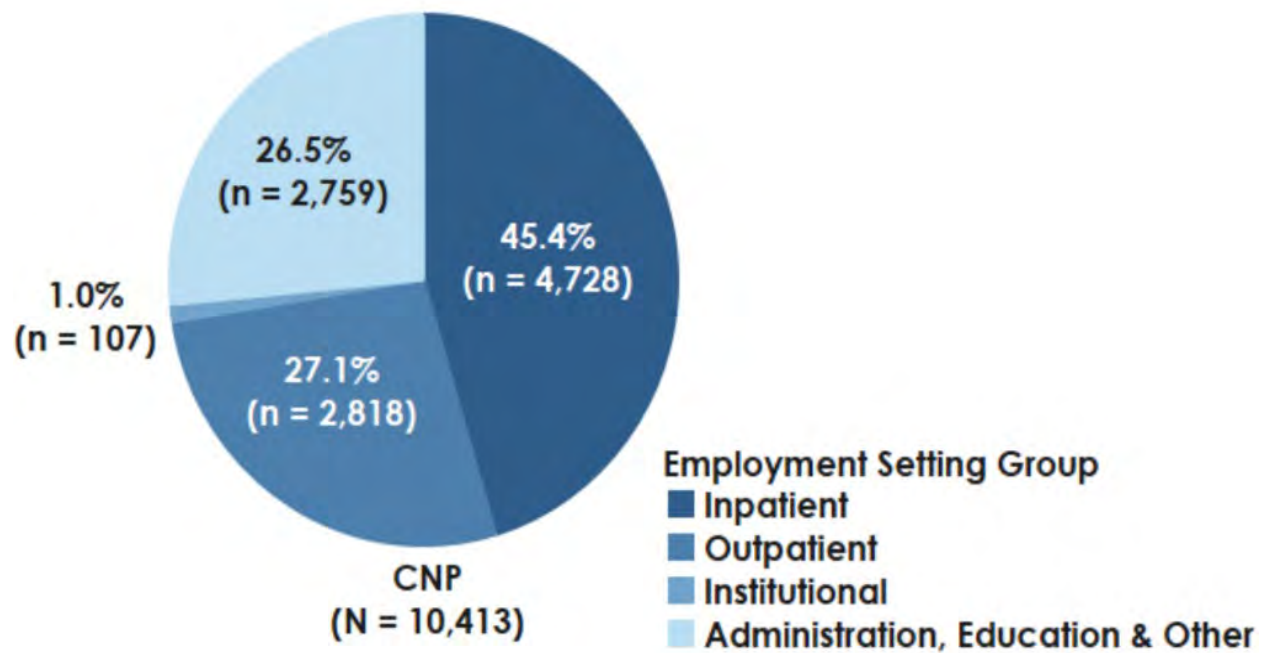
*Figure 58 does not include CNPs who did not indicate their employment setting (N = 1692).

Figure 59 maps the rate of CNPs by the employment location per population of 10k. With the majority of CNPs practicing in metropolitan areas.

Figure 59. CNP Employment Location by County (County of Employment)

CNPs per 10,000
(N = 7,966)
- 5 - 7
- 13 - 21
- None
- <1 - 4
- 8 - 12
- 22 - 41
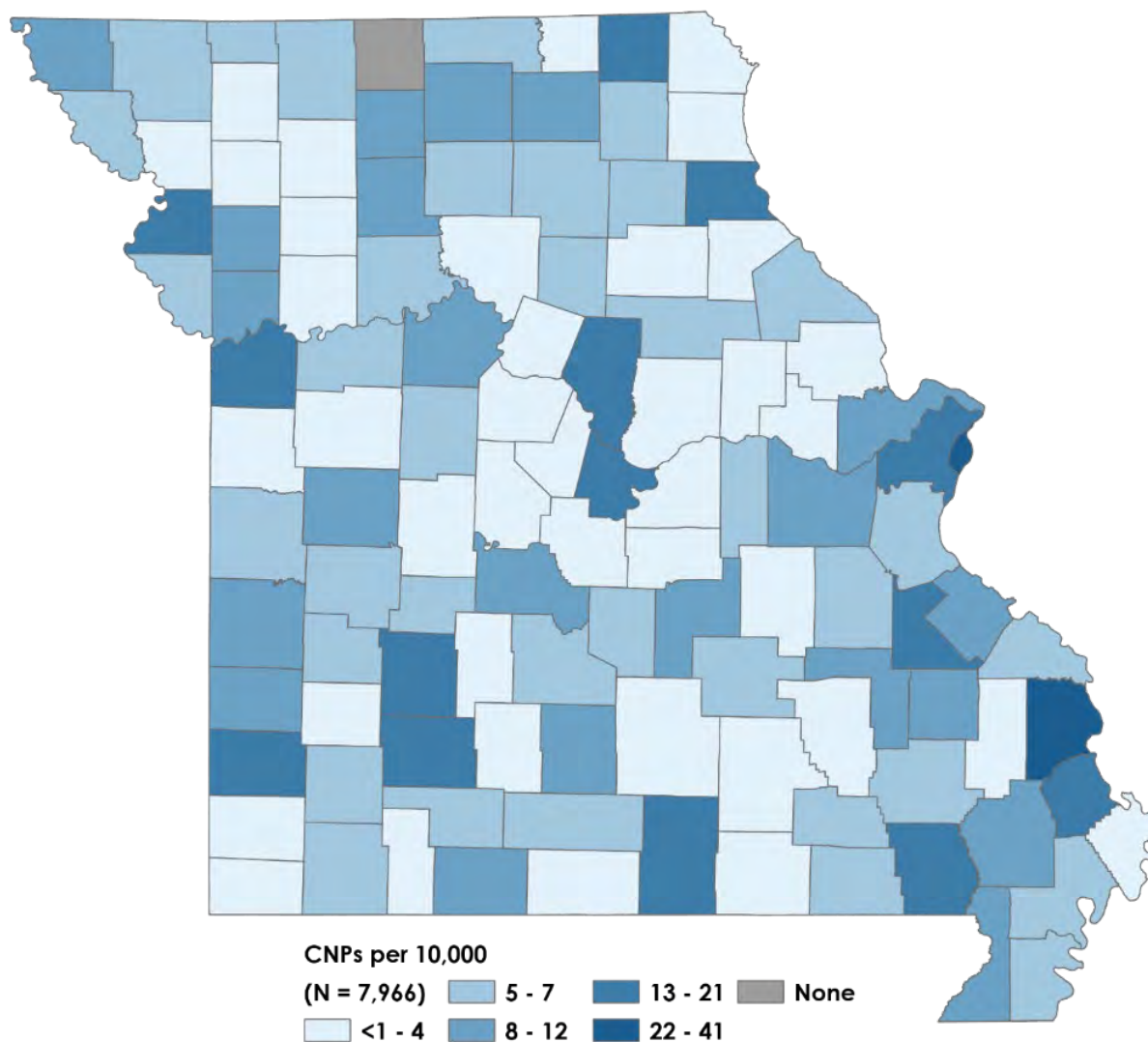
Missouri = 13 CNPs per 10,000

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Figure 60. CNP Employment Setting Group by County as Rate per 10K

CNPs in Inpatient Setting

(N=3,771) ▢ 3 - 5   ▢ 10 - 13   ▢ None
▢ <1 - 2   ▢ 6 - 9   ▢ 14 - 29

Inpatient setting includes Hospital, Assisted Living Facility
and Nursing Home/Extended Care

CNPs in Outpatent Setting

(N=2,107) ▢ 2   ▢ 4 - 5   ▢ None
▢ <1 - 1   ▢ 3   ▢ 6 - 7

Outpatient setting includes Ambulatory Care, Home Health,
Community Health, Dialysis Center, Hospice
and Physician's Office/Primary Care

CNPs in Admin, Education, Other Setting

(N=1,988) ▢ 2   ▢ 4 - 5   ▢ None
▢ <1 - 1   ▢ 3   ▢ 6 - 8

Admin, Education, Other Setting includes Public Health,
Occupational Health, Insurance Claims/Benefits,
Policy/Planning/Regulatory/Licensing Agency,
School of Nursing and Other

CNPs in Institutional Setting

(N=78) ▢ 1   ▢ None
▢ <1

Institutional Setting includes Correctional Facility
and School Health Service

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

CNP Employment Setting

The CNPs were predominately employed in 'hospital' settings (42.5%), with 20.5% practicing in 'ambulatory care' settings. The majority of CNPs were working in 'primary care' settings. CNP rates demonstrate low employment opportunities across all employment settings and were exacerbated in 'institutional' settings with only 1% across all types of 'institutional' settings and 0.9% in 'public health'.

Figure 61. CNP Employment Settings

Employment Group	Employment Setting	Percentage
Inpatient (N = 4,729)	Assisted Living Facility (n = 49)	0.5%
	Hospital (n = 4,430)	42.5%
	Nursing Home/Extended Care (n = 250)	2.4%
Outpatient (N = 2,818)	Ambulatory Care Setting (n = 2,131)	20.5%
	Community Health (n = 437)	4.2%
	Dialysis Center (n = 28)	0.3%
	Home Health (n = 159)	1.5%
	Hospice (n = 63)	0.6%
Institutional (N = 107)	Correctional Facility (n = 51)	0.5%
	School Health Service (n = 56)	0.5%
Administration, Education & Other (N = 2,759)	Insurance Claims/Benefits (n = 28)	0.3%
	Occupational Health (n = 74)	0.7%
	Policy/Planning/Regulatory/Licensing Agency (n < 10)	0.0%
	Public Health (n = 89)	0.9%
	School of Nursing (n = 255)	2.4%
	Other (n = 2,309)	22.2%

(N = 10,413)

CNP Employment Specialty

The majority of the Missouri CNP workforce reported 'family health' (15.2%), 'acute care/critical care' (12.3%), and 'pediatrics' (9%) as their employment specialty. The remaining CNPs sparsely distributed among specialties from 'adult health' 6.4% to 0.4% working in 'public health' demonstrating low rates in all other specialties shown in Figure 62.

Figure 62. CNP Employment Specialty

Specialty	Percentage
Acute care/Critical care (n = 1,154)	12.3%
Adult Health (n = 597)	6.4%
Anesthesia (n = 70)	0.7%
Cardiology (n = 477)	5.1%
Community (n = 61)	0.7%
Emergency/Trauma (n = 748)	8.0%
Family Health (n = 1,428)	15.2%
Geriatric/Gerontology (n = 334)	3.6%
Home Health (n = 84)	0.9%
Maternal - Child Health/Obstetrics (n = 144)	1.5%
Medical Surgical (n = 343)	3.7%
Neonatal (n = 324)	3.5%
Nephrology (n = 74)	0.8%
Occupational health (n = 68)	0.7%
Oncology (n = 319)	3.4%
Palliative Care/Hospice (n = 115)	1.2%
Pediatrics (n = 845)	9.0%
Perioperative (n = 143)	1.5%
Psychiatric/Mental Health/Substance Abuse (n = 520)	5.6%
Public Health (n = 33)	0.4%
Rehabilitation (n = 60)	0.6%
School Health (n = 30)	0.3%
Women's Health (n = 317)	3.4%
Other - Clinical Specialties (n = 1,004)	10.7%
Other - Non Clinical Specialties (n = 77)	0.8%

(N = 9,369)

Figure 63. CNP Number of Positions Held

CNP
(N = 10,447)

| 83.2% | 13.8% | 3.0% |

■ One   ■ Two   ■ Three
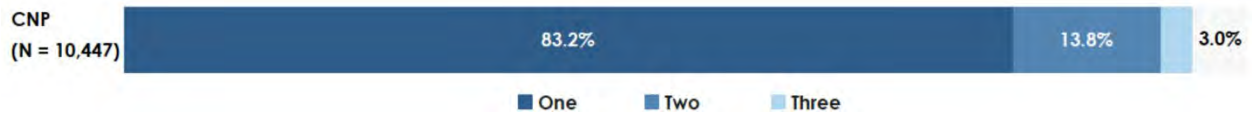
*Figure 63 does not include CNPs who did not indicate their number of positions (N = 1,658).

Figure 64. Position Description of CNPs

Advanced Practice Nurse (n = 7,222): 69.4%
Staff Nurse (n = 2,522): 24.2%
Nurse Manager (n = 112): 1.1%
Nurse Researcher (n = 19): 0.2%
Nurse Faculty (n = 195): 1.9%
Other - Health Related (n = 181): 1.7%
Nursing Consultant (n = 21): 0.2%
Nurse Executive (n = 61): 0.6%
Case Manager (n = 73): 0.7%
Other - Not Health Related (n < 10): 0.1%

(N = 7,677)
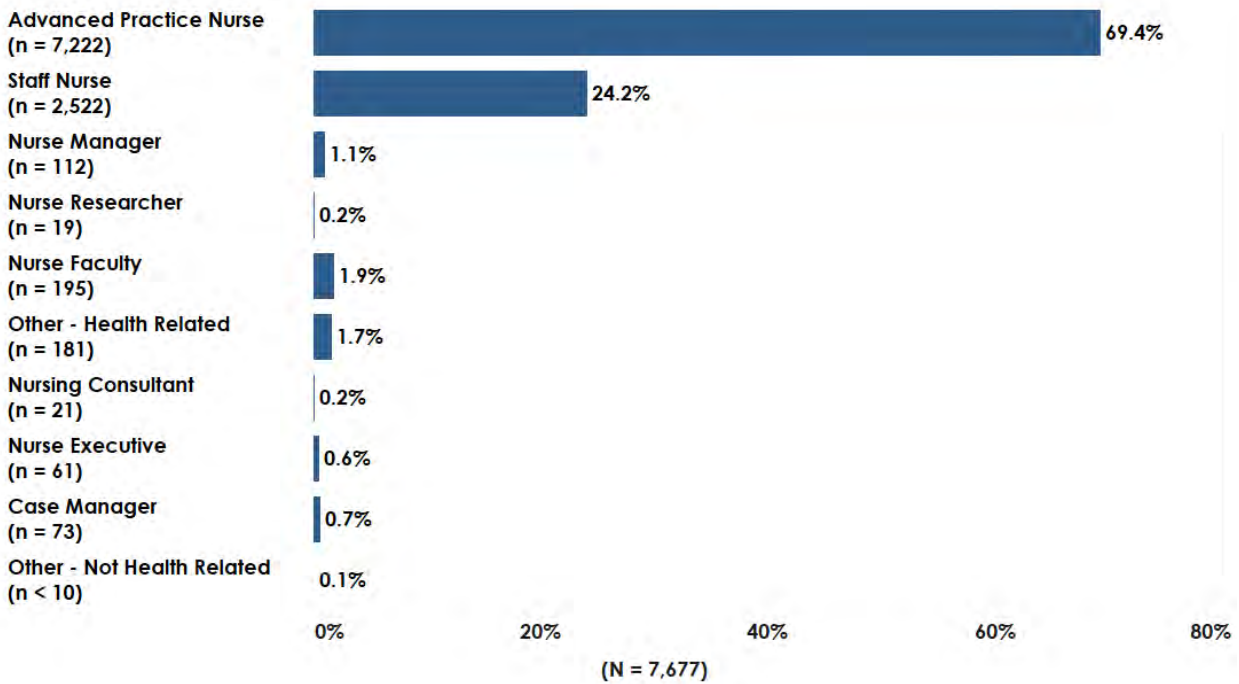
*Figure 64 does not include CNPs who did not indicate their position (N = 2,210).

Figure 65. CNP Average Hours Working Per Week

5.3% (n = 558)
19.8% (n = 2,067)
14.8% (n = 1,547)
60.1% (n = 6,277)

CNP
(N = 10,447)

Average Hours Worked Weekly
■ 0-35
■ 36-40
■ 41-50
■ 51+
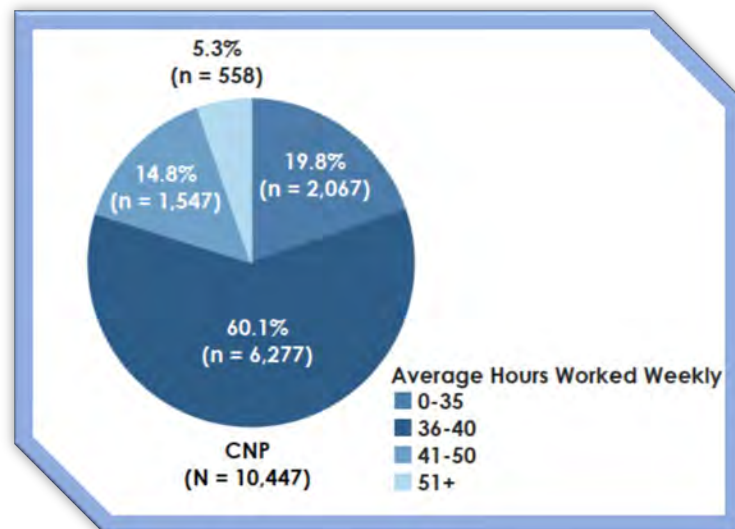
APRN Certified Nurse Specialist (CNS)

The CNS workforce comprised approximately 1% of the APRN workforce.

CNS Demographic Distribution

The CNSs were mostly comprised of nurses ages 45-54 (38.1%)

CNS Age Distribution

The mean age of the CNS workforce was 59, whereas the modal age was 64 demonstrating an aging workforce that may be reaching retirement age at a faster rate than nurses entering the field.

Figure 66. CNS Age Distribution
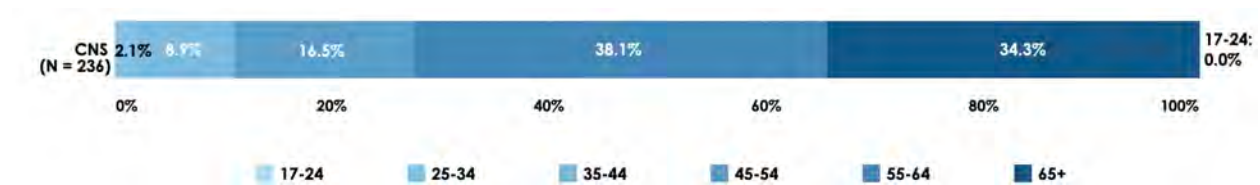
CNS Gender Characteristics and Race and Ethnicity Characteristics

The CNS workforce predominantly female (94.4%), revealed scarce populations of BIPOC (5.5%) and Hispanic (1.3%) nurses.

Figure 67. CNS Gender Distribution
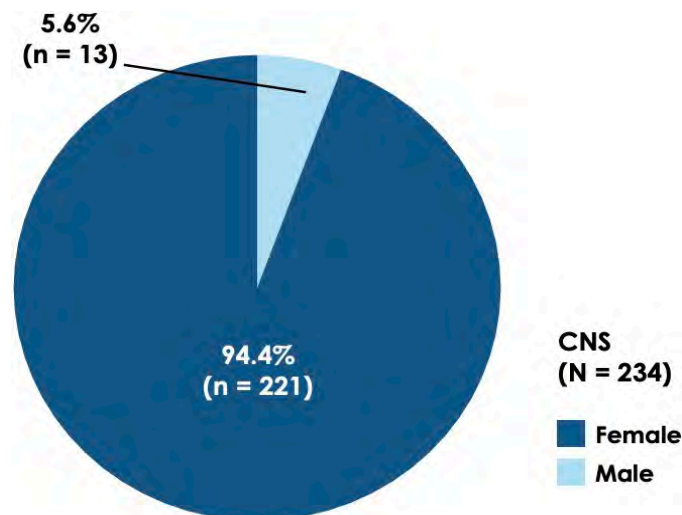
Figure 68. CNS Race and Ethnicity
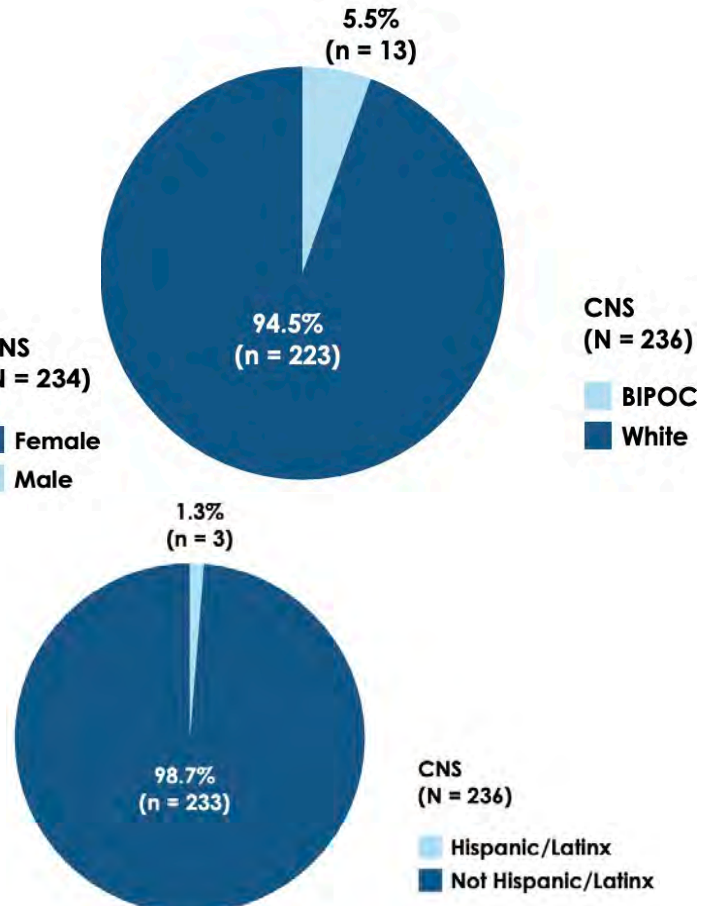
Figure 69. Percentage of APRN CNSs 55 Years and Older by Employment Setting
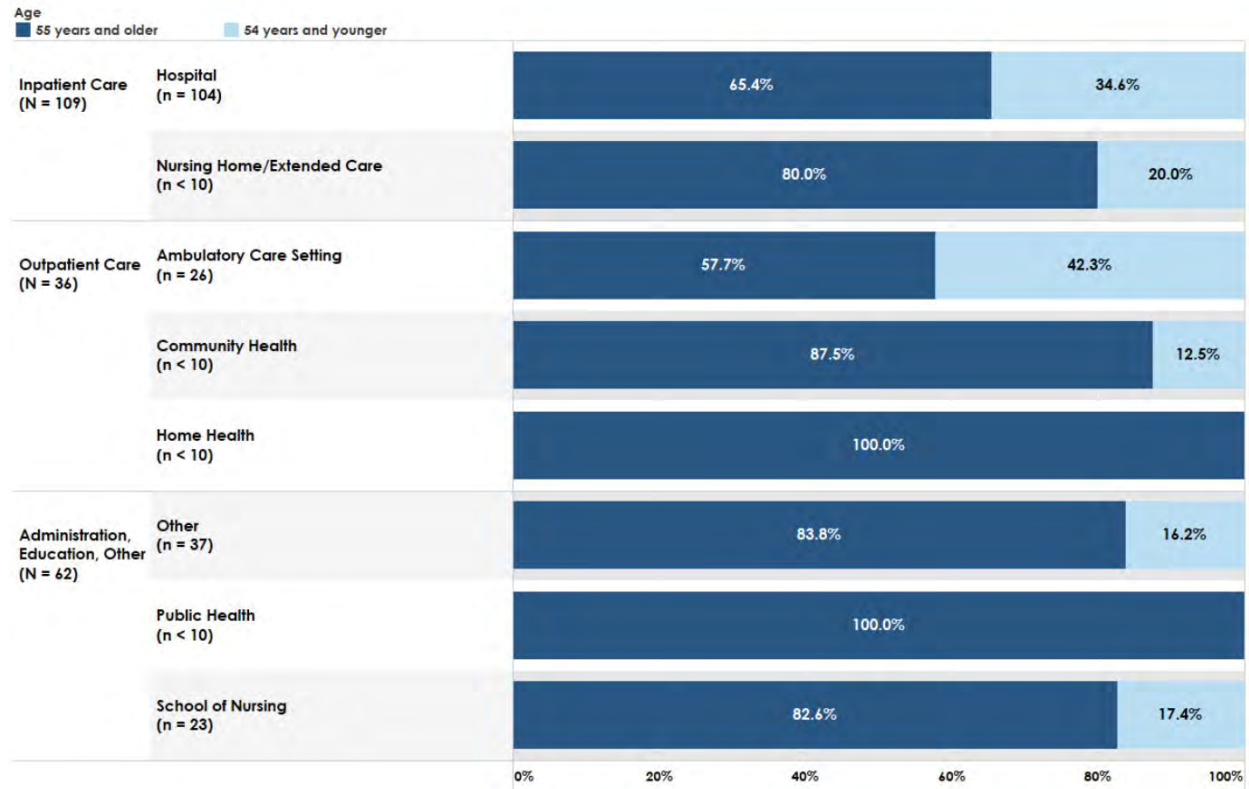
*Figures 69,70, and 71 do not include the CNSs who did not report their employment setting (N = 64).

CNS Employment Characteristics and Setting

More than half of the CNS practitioners worked in inpatient employment settings (52.7%) in hospitals (50.2%) and most specialized in mental health, behavioral health, or substance abuse services (24.1%).

Figure 70. CNS Primary Employment Setting by Type of Setting

30.0%
(n = 62)

52.7%
(n 109)

17.4%
(n = 36)

CNS
(N = 207)

Employment Setting Group
■ Inpatient
■ Outpatient
■ Administration, Education & Other
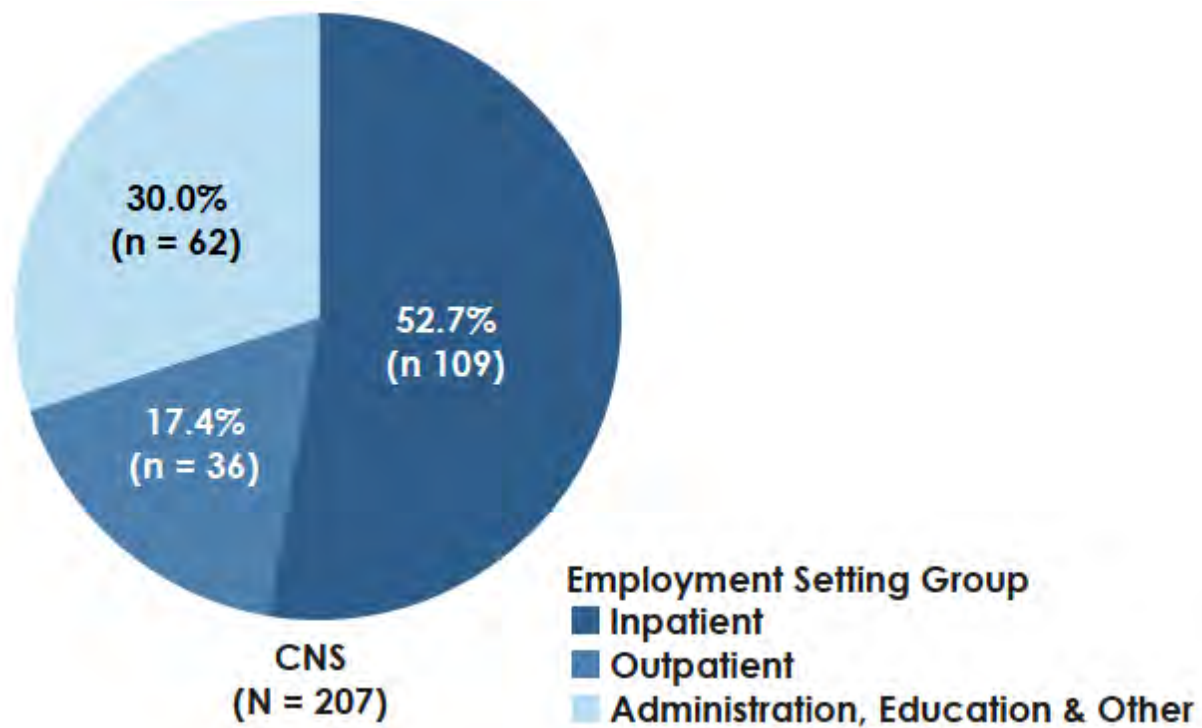
Figure 71. CNS Employment Settings

Employment Group	Employment Setting	
Inpatient (N = 109)	Hospital (n = 104)	50.2%
	Nursing Home/Extended Care (n < 10)	2.4%
Outpatient (N = 36)	Ambulatory Care Setting (n = 26)	12.6%
	Community Health (n < 10)	3.9%
	Home Health (n < 10)	1.0%
Administration, Education & Other (N = 62)	Public Health (n < 10)	1.0%
	School of Nursing (n = 23)	11.1%
	Other (n = 37)	17.9%

(N = 207)
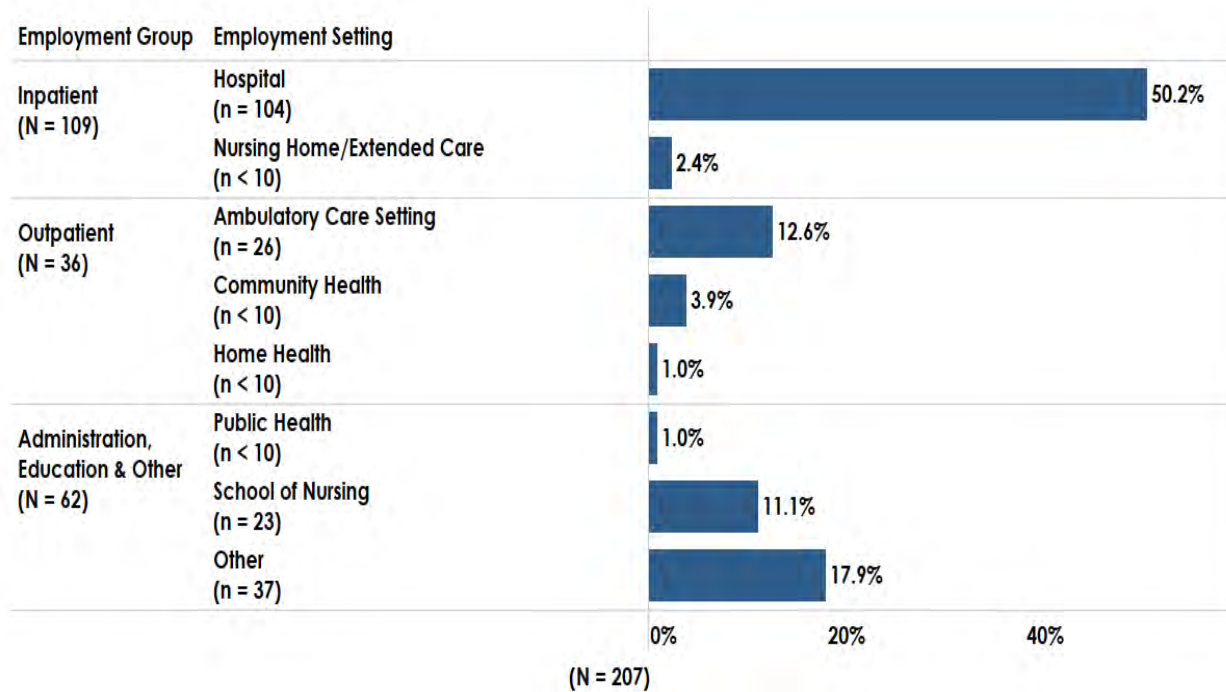
CNS Employment Specialty

The majority of CNSs identified hospitals (50.2%) most frequently and ambulatory care settings with less than 50% of the workforce distributed across the outpatient and administration-type positions.

Figure 72. CNS Employment Specialty

(N = 191)
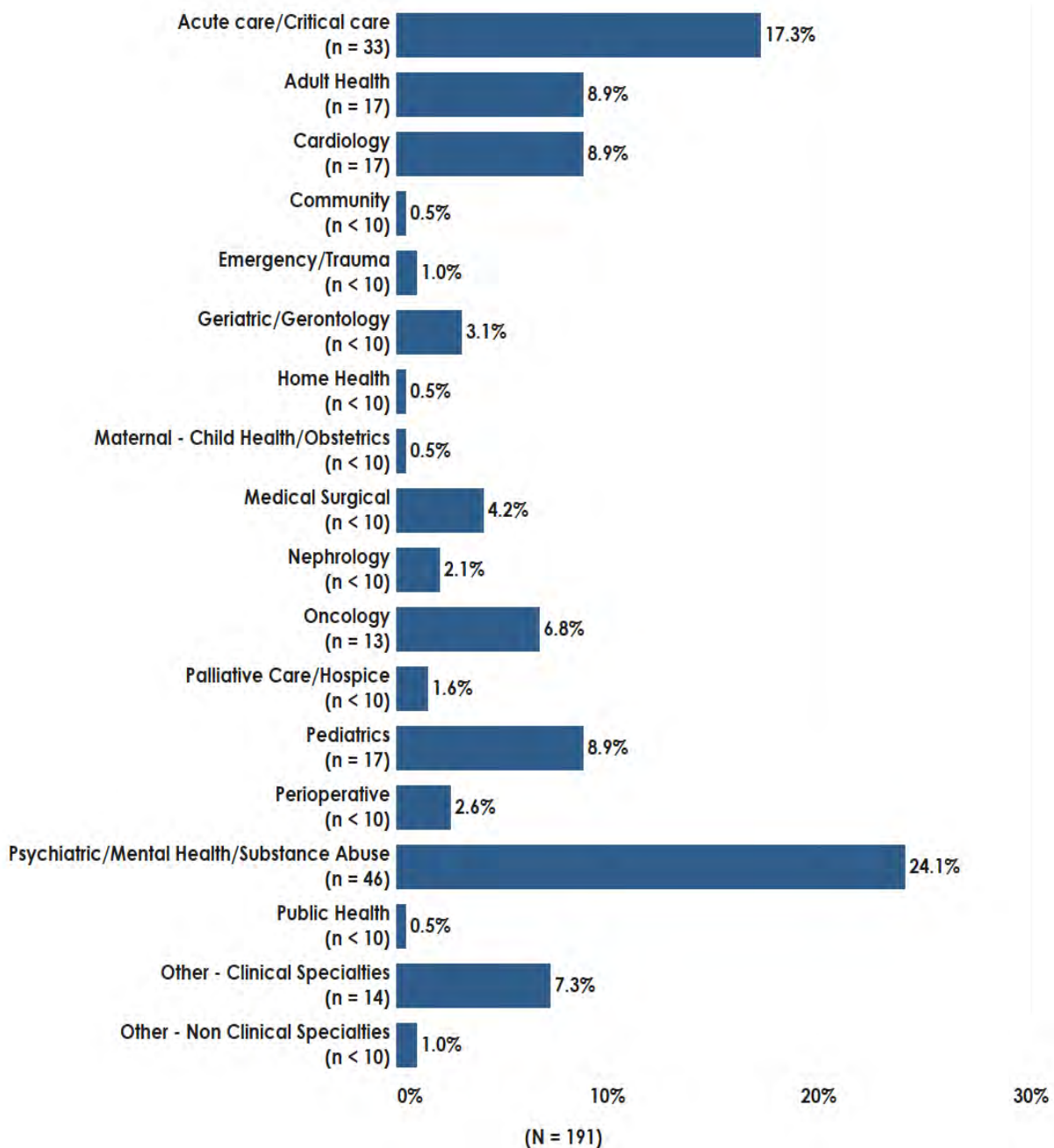
CNS Employment Location by County

Figure 73 maps the percentage of the CNS workforce employed in a county, ranging from none in several counties across Missouri and most counties with CNSs were in metropolitan areas with significantly low rates of CNSs per 10k residents.

Figure 73. CNS Employment Location by County (County of Employment)

CNSs per 10,000
(N = 170) █ 1 █ 2 █ None
█ <1
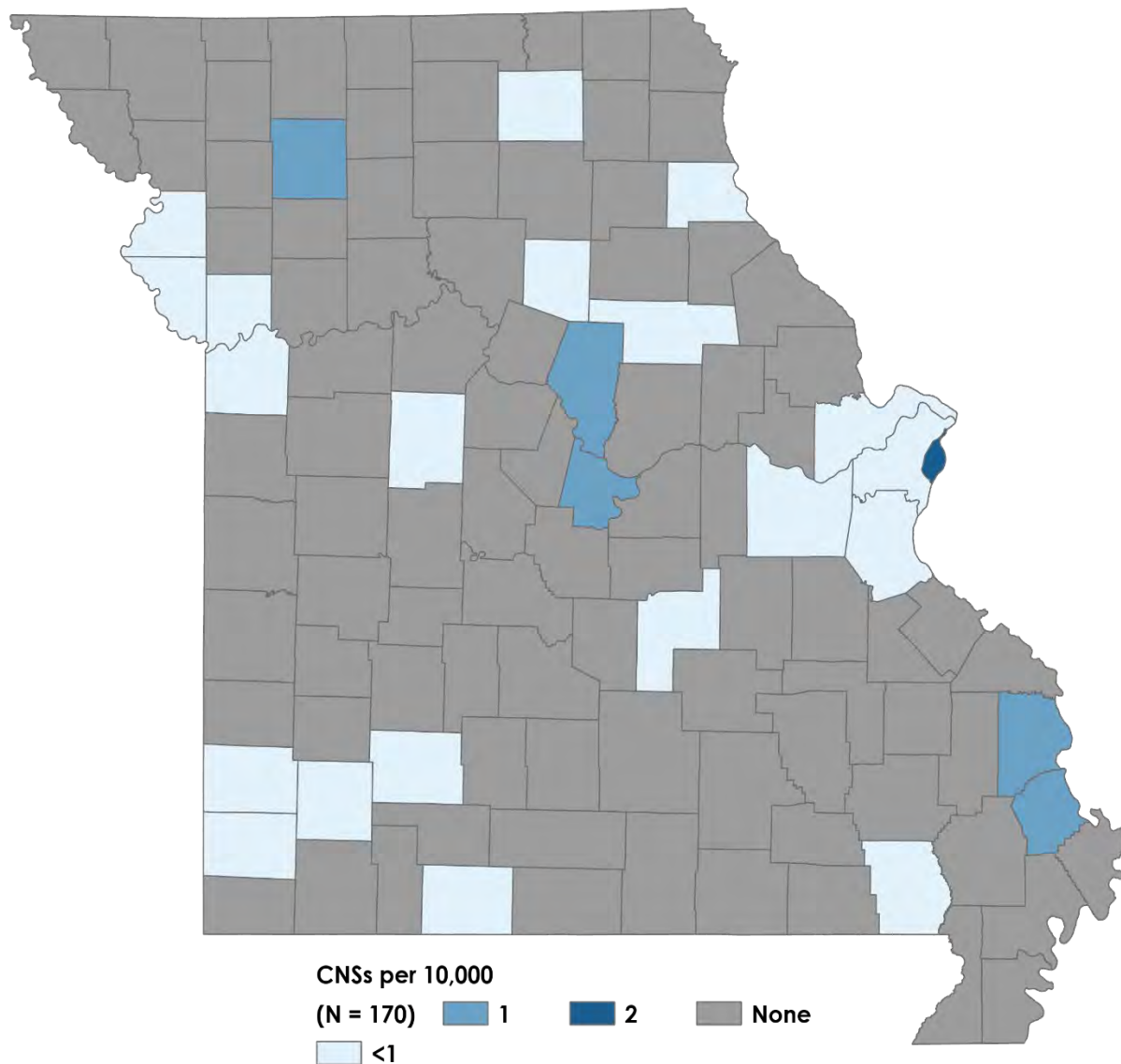
Missouri = 0.3 CNSs per 10,000

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Figure 74. CNS Employment Group Setting by County as a Rate per 10k

CNSs in Inpatient Setting

(N=90) ☐ 1 ☐ None

☐ <1

Inpatient setting includes Hospital, Assisted Living Facility and Nursing Home/Extended Care

CNSs in Outpatent Setting

(N=27) ☐ None

☐ <1

Outpatient setting includes Ambulatory Care, Home Health, Community Health, Dialysis Center, Hospice and Physician's Office/Primary Care

CNSs in Admin, Education, Other Setting

(N=53) ☐ None

☐ <1

Admin, Education, Other Setting includes Public Health, Occupational Health, Insurance Claims/Benefits, Policy/Planning/Regulatory/Licensing Agency, School of Nursing and Other

CNSs in Institutional Setting

(N=0) ☐ None

☐ 0

Institutional Setting includes Correctional Facility and School Health Service

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Figure 75. CNS Number of Positions Held

CNS
(N = 207)

| 87.0% | 11.1% | 1.9% |

■ One ■ Two ■ Three

Figure 76. Position Description of CNSs

Advanced Practice Nurse
(n = 145) — 71.1%

Staff Nurse
(n = 13) — 6.4%

Nurse Manager
(n < 10) — 2.0%

Nurse Researcher
(n < 10) — 2.5%

Nurse Faculty
(n = 16) — 7.8%

Nursing Consultant
(n < 10) — 1.0%

Nurse Executive
(n < 10) — 3.4%

Other - Health Related
(n = 12) — 5.9%

0%   20%   40%   60%   80%

(N = 204)
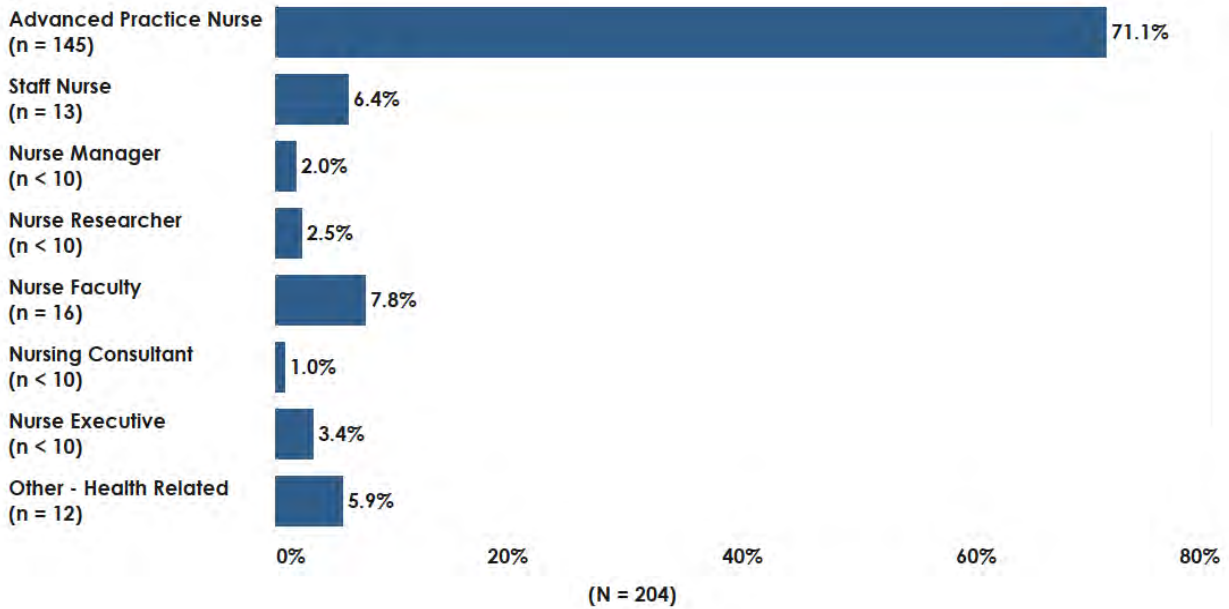
Figure 77. CNS Average Hours Working Per Week

7.7%
(n = 16)

15.0%
(n = 31)

30.9%
(n = 64)

46.4%
(n = 96)

CNS
(N = 207)

Average Hours Worked Weekly
■ 0-35
■ 36-40
■ 41-50
■ 51+
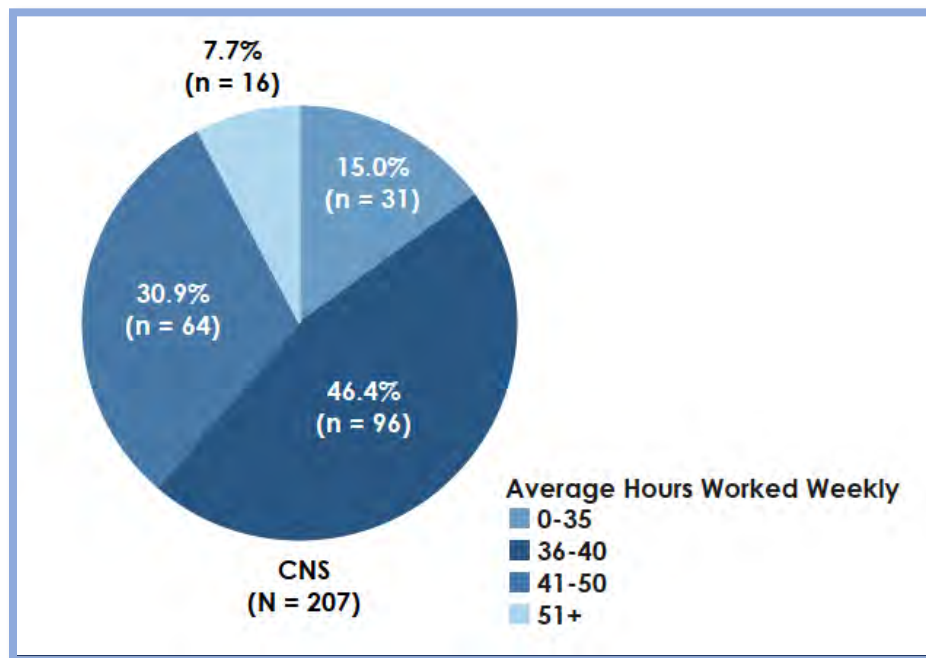
APRN Certified Nurse Anesthetist (CRNA)

The CRNA comprised approximately 15% of the APRN workforce.

CRNA Demographic Characteristics

CRNAs predominately comprised nurses ages 35-44 (33.6%) and 45-54 (17.6%).

CRNA Age Distribution

The CRNA mean age was 48, and the modal age was 38 with much of the workforce distributed under 65.

Figure 78. CRNA Age Distribution
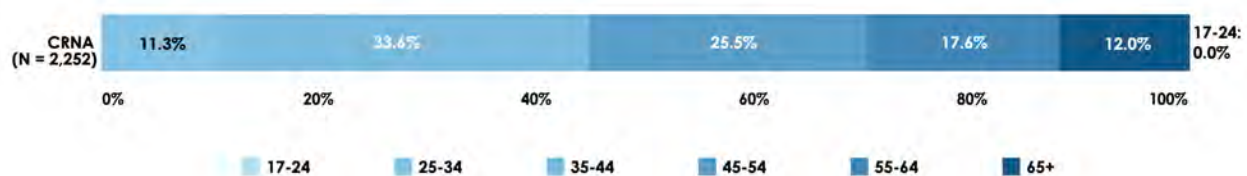
CRNA Gender Characteristics and Race and Ethnicity Characteristics

The CRNA workforce represented a more comparable representation of the female (58%) and male workforce (42%) than the other licensed types of advanced practice nurses.

Figure 79. CRNA Gender Distribution   Figure 80. CRNA Race and Ethnicity
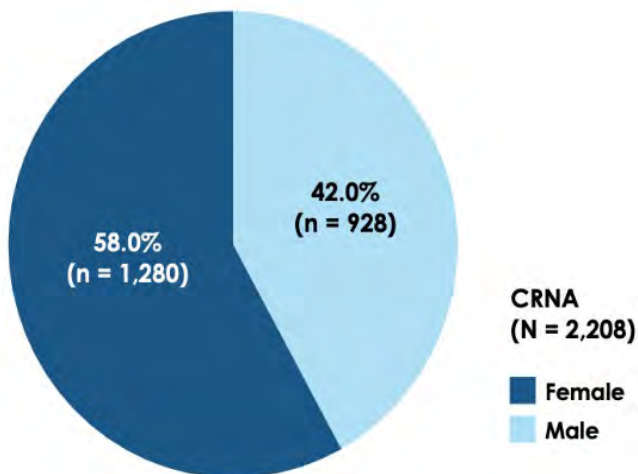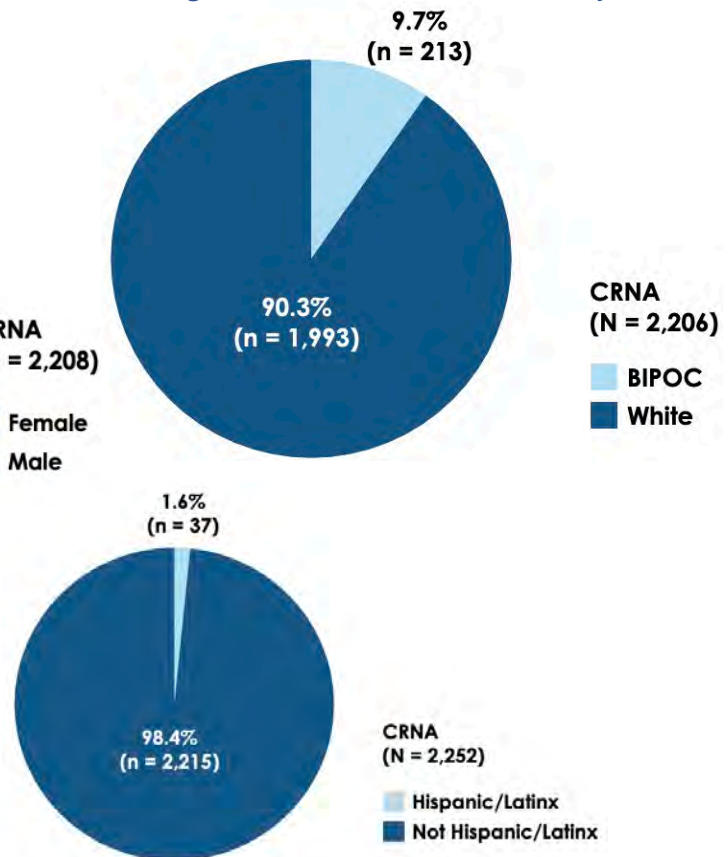
CRNA Employment Characteristics

CRNA Employment Characteristics and Setting

The CRNAs were identified by the CRNA license type. The nurses licensed as certified registered nurse anesthetists were reflected in the report as CRNAs.

The majority of the CRNAs 55 years and older worked in hospital employment settings. The CRNAs who reported employment in home health were n < 10 for the total CRNA population. The CRNAs wo reported employment in school health services were only n = 31 and demonstrated the majority 54 years and younger.

Figure 81. Percentage of CRNAs 55 Years and Older by Employment Setting
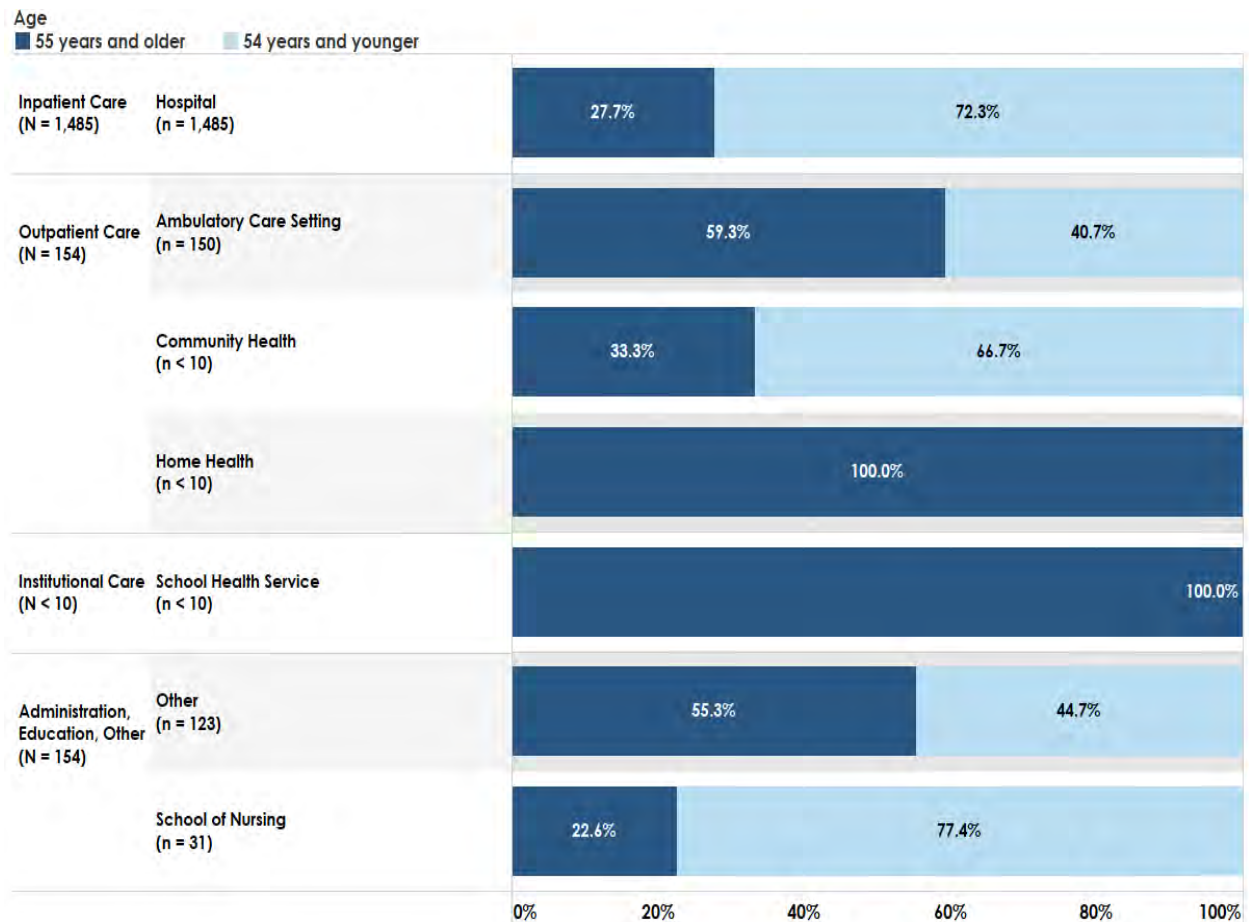
*Figure 81. does not include the CRNAs who did not indicate their employment setting (N = 14).

The CRNAs provided services in inpatient hospital settings more than any other setting (82.7%).

Figure 82. CRNA Employment Grouped by Employment Setting

8.6%
(n = 154)

8.6%
(n = 154)

82.7%
(n = 1,485)

0.1% / (n <10)

CRNA
(N = 1,797)

Employment Setting Group
■ Inpatient
■ Outpatient
■ Institutional
■ Administration, Education & Other
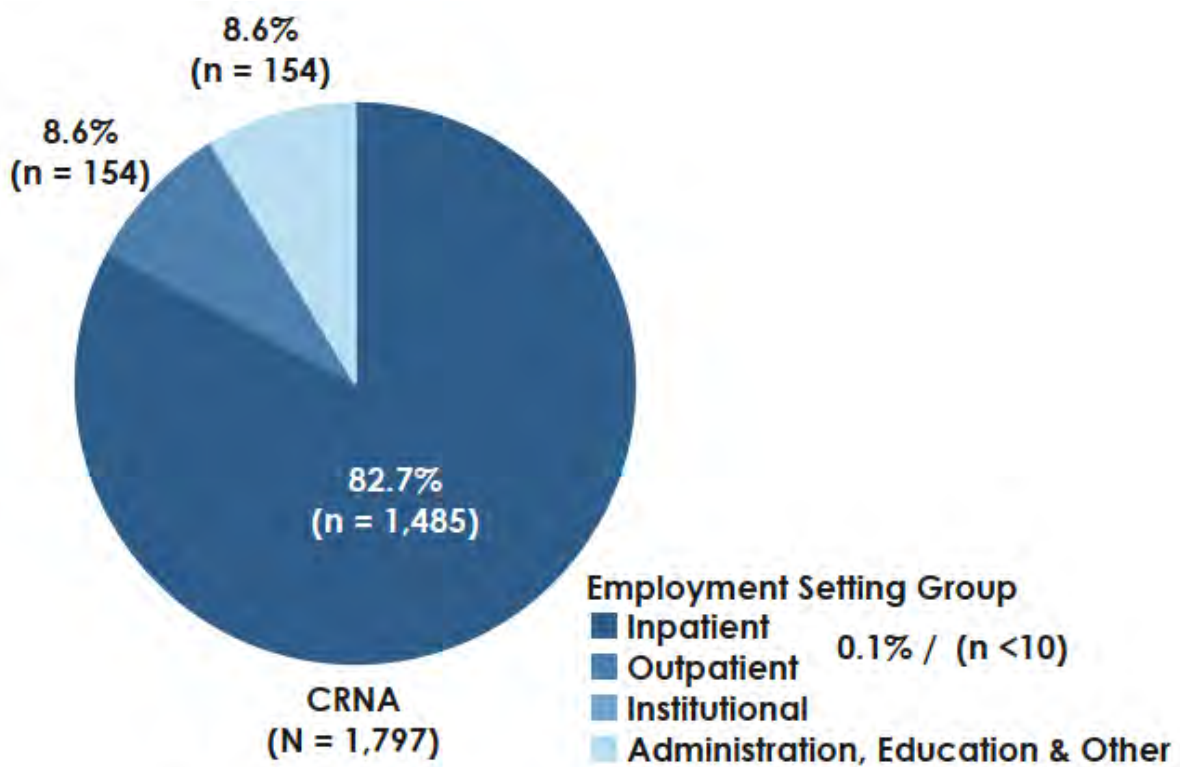
Figure 83. CRNA Employment Settings

Employment Group	Employment Setting	
Inpatient (N = 1,485)	Hospital (n = 1,485)	82.7%
Outpatient (N = 154)	Ambulatory Care Setting (n = 150)	8.4%
	Community Health (n < 10)	0.2%
	Home Health (n < 10)	0.1%
Institutional (N < 10)	School Health Service (n < 10)	0.1%
Administration, Education & Other (N = 154)	School of Nursing (n = 31)	1.7%
	Other (n = 123)	6.9%

(N = 1,795)
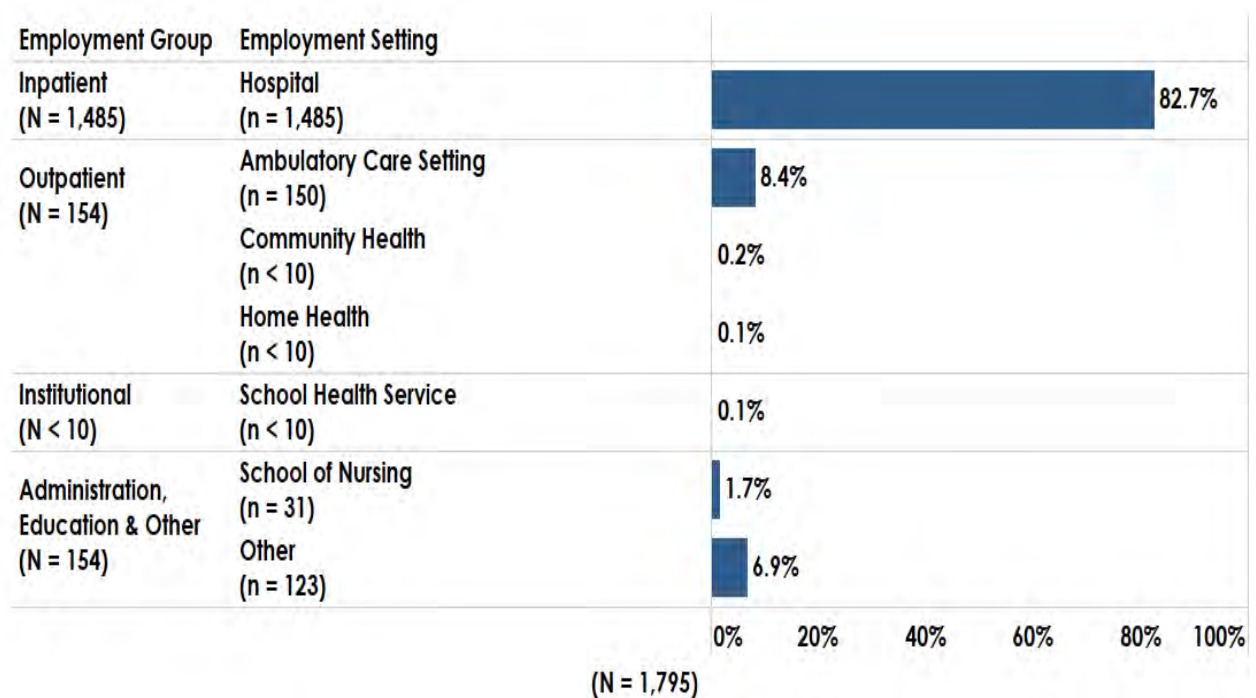
CRNA Employment Specialty

As expected with the majority of the CRNAs providing anesthesia services almost all CRNAs reported anesthesia as their specialty (92.3%).

Figure 84. CRNA Employment Specialty

Acute care/Critical care (n = 90): 5.0%
Adult Health (n < 10): 0.1%
Anesthesia (n = 1,657): 92.3%
Cardiology (n < 10): 0.2%
Emergency/Trauma (n < 10): 0.2%
Maternal - Child Health/Obstetrics (n < 10): 0.2%
Medical Surgical (n < 10): 0.2%
Occupational health (n < 10): 0.1%
Pediatrics (n < 10): 0.4%
Perioperative (n = 13): 0.7%
Other - Clinical Specialties (n = 10): 0.6%
Other - Non Clinical Specialties (n < 10): 0.1%

(N = 1,795)
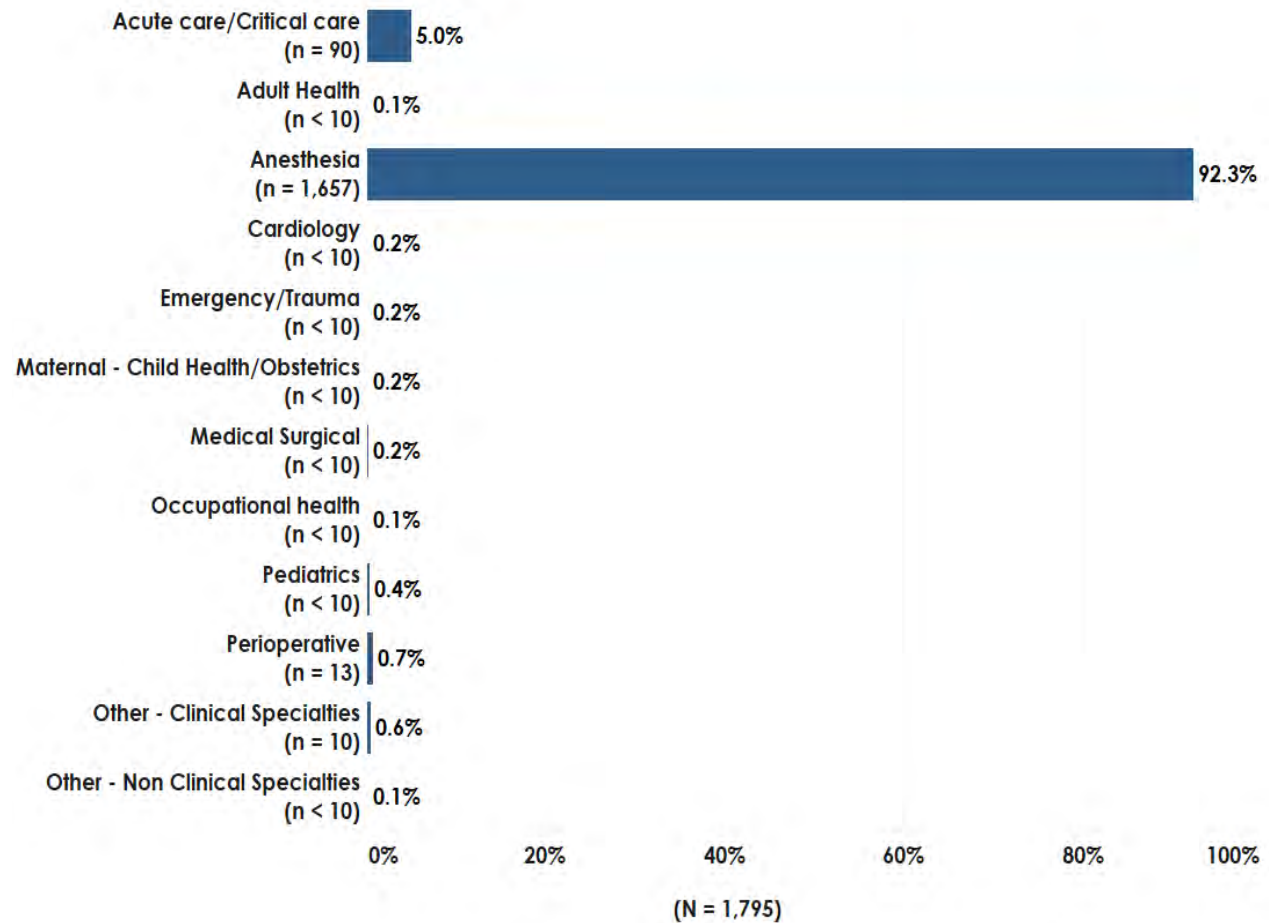
CRNA Employment Location by County

Figure 85. maps the percentage of the CRNA workforce employed in a county, ranging from none to the majority employed in metropolitan and micropolitan counties in the Kansas City and St. Louis areas.

Figure 85. CRNA Employment Location by County (County of Employment)

CRNAs per 10,000

(N = 1,198)

1
<1
2
3 - 4
5 - 6
None
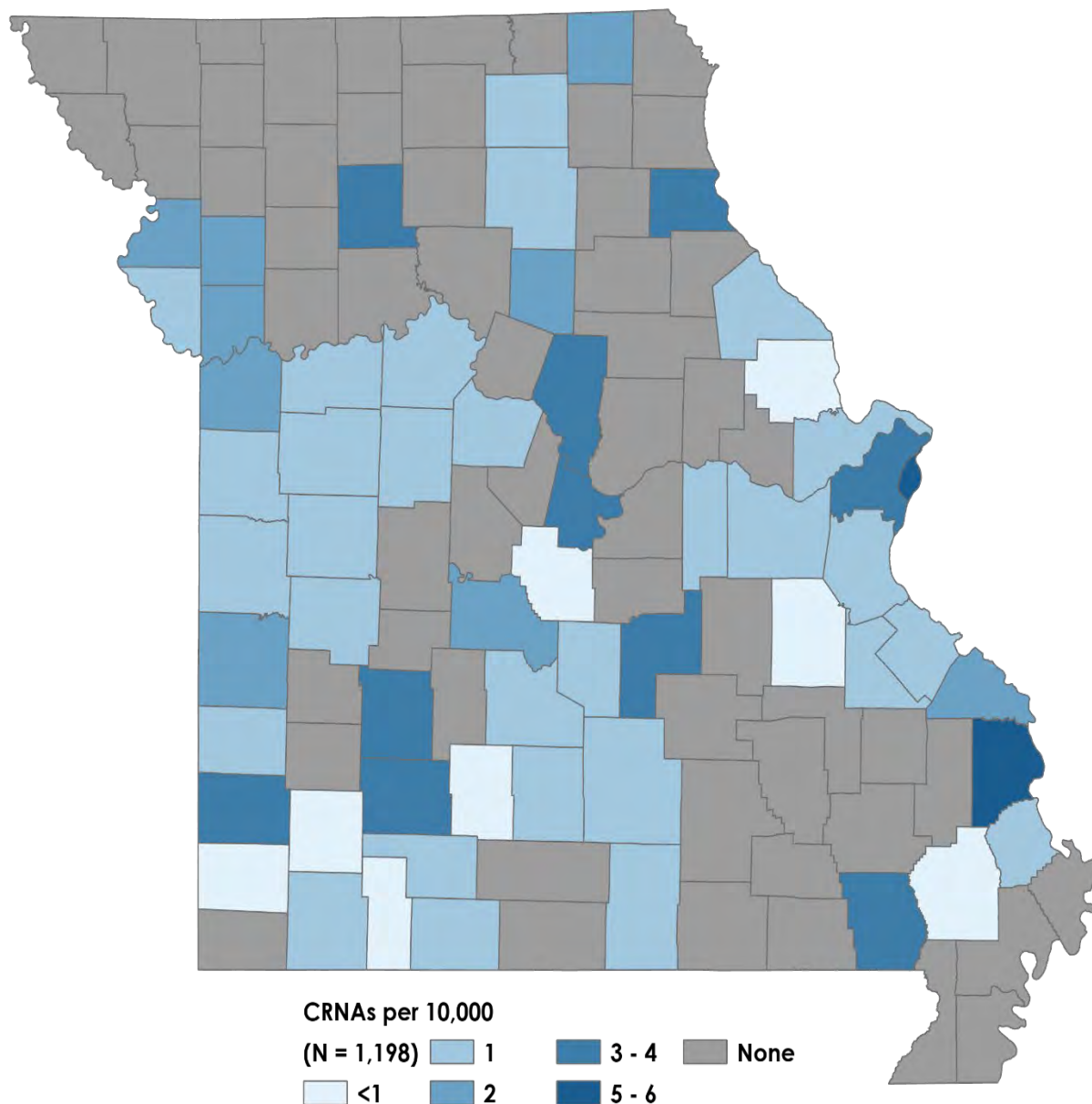
Missouri = 2 CRNAs per 10,000

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Figure 86. CRNA Employment Group Setting by County as a Rate per 10k

CRNAs in Inpatient Setting

(N=992) ☐ 1 ☐ 3 ☐ None
☐ <1 ☐ 2 ☐ 4 - 5

Inpatient setting includes Hospital, Assisted Living Facility
and Nursing Home/Extended Care

CRNAs in Outpatient Setting

(N=95) ☐ 1 ☐ None
☐ <1

Outpatient setting includes Ambulatory Care, Home Health,
Community Health, Dialysis Center, Hospice
and Physician's Office/Primary Care

CRNAs in Admin, Education, Other Setting

(N=107) ☐ 1 ☐ None
☐ <1

Admin, Education, Other Setting includes Public Health,
Occupational Health, Insurance Claims/Benefits,
Policy/Planning/Regulatory/Licensing Agency,
School of Nursing and Other

CRNAs in Institutional Setting

(N=1) ☐ None
☐ <1

Institutional Setting includes Correctional Facility
and School Health Service

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Figure 87. CRNA Number of Positions Held

CRNA (N = 1,803)

One	Two	Three
81.1%	13.3%	5.5%

Figure 88. Position Description of CRNAs

Advanced Practice Nurse (n = 1,596): 88.6%

Staff Nurse (n = 125): 6.9%

Nurse Faculty (n < 10): 0.4%

Nurse Executive (n < 10): 0.1%

Other - Health Related (n = 70): 3.9%

Other - Not Health Related (n < 10): 0.1%

(N = 1,801)
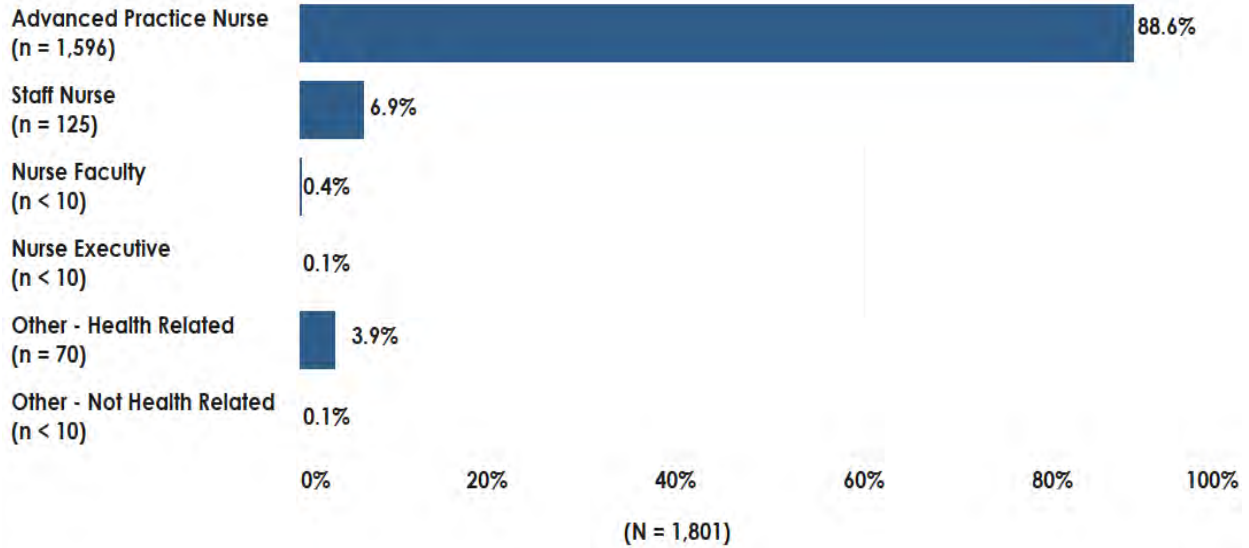
Figure 89. CRNA Average Hours Working Per Week

5.2% (n = 93)
23.8% (n = 429)
14.8% (n = 267)
56.2% (n = 1,014)

CRNA (N = 1,803)

Average Hours Worked Weekly
- 0-35
- 36-40
- 41-50
- 51+
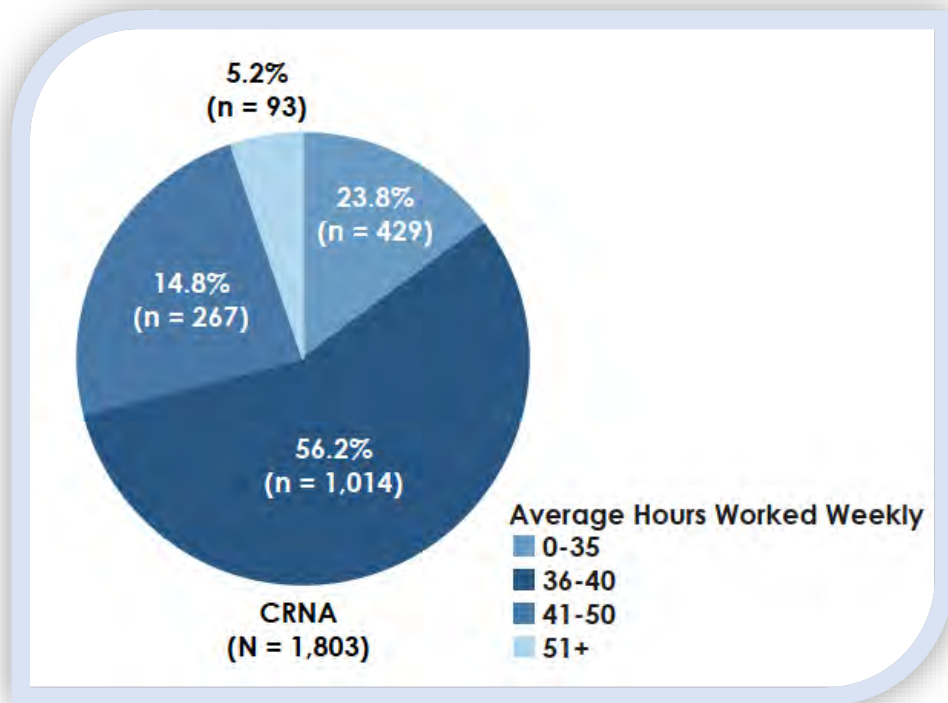
APRN Certified Nurse Midwives (CNM)

The CNM workforce comprised significantly <1% of the total APRN workforce consisting of the fewest advanced certifications in Missouri.

CNM Demographic Characteristics

CNM Age Distribution
The mean age of the CNM workforce was approximately 47, and the modal age was 39. Figure 90 demonstrates the CNM workforce was mostly distributed among age cohorts from 25-54 (35%).

Figure 90. CNM Age
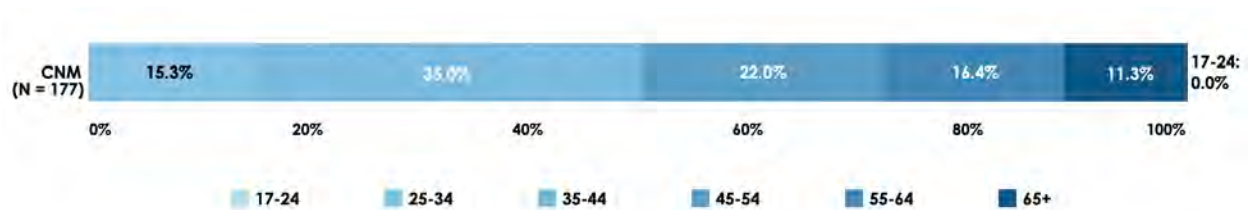
CNM Gender Characteristics and Race and Ethnicity Characteristics

Figure 91. CNM Gender Distribution
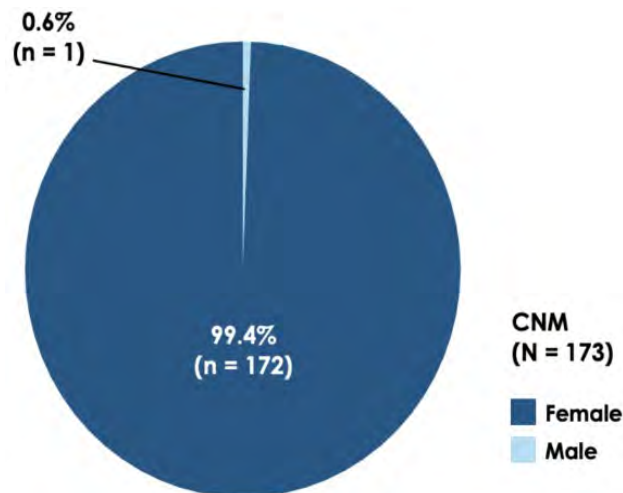
Figure 92. CNM by Race and Ethnicity

80
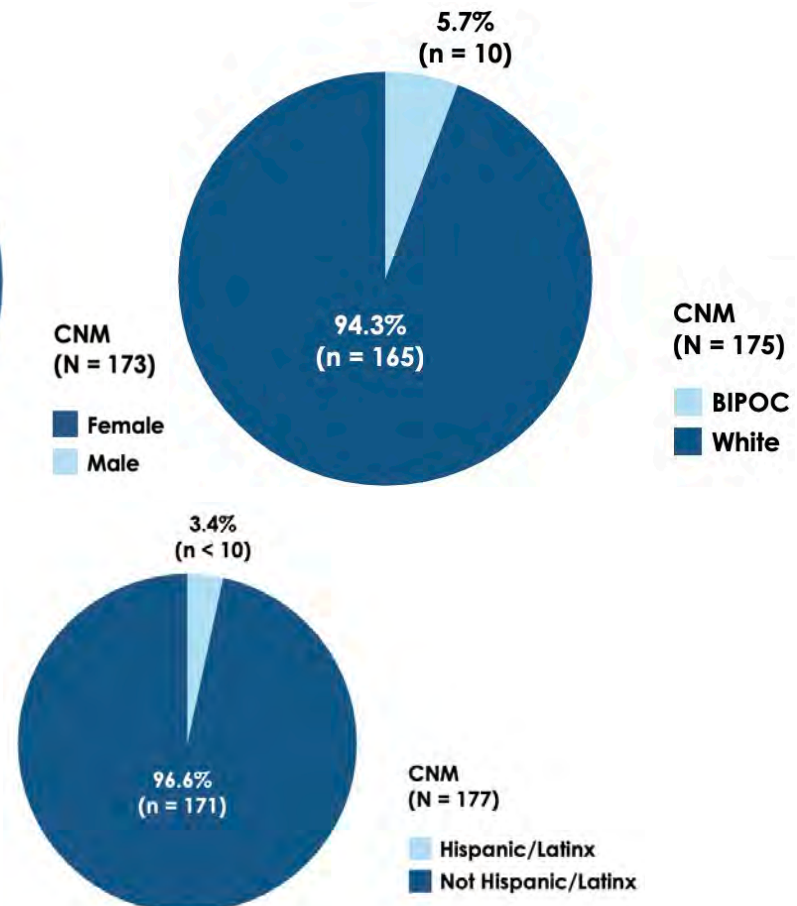
CNMs by Employment County and Employment Setting

Analysis of the 2023 Nursys data demonstrated that the CNM workforce was largely made up of those 54 years and younger with most of the workforce working in the hospital setting with very few available in Missouri.

Figure 93. Percentage of CNMs 55 Years and Older by Employment Setting
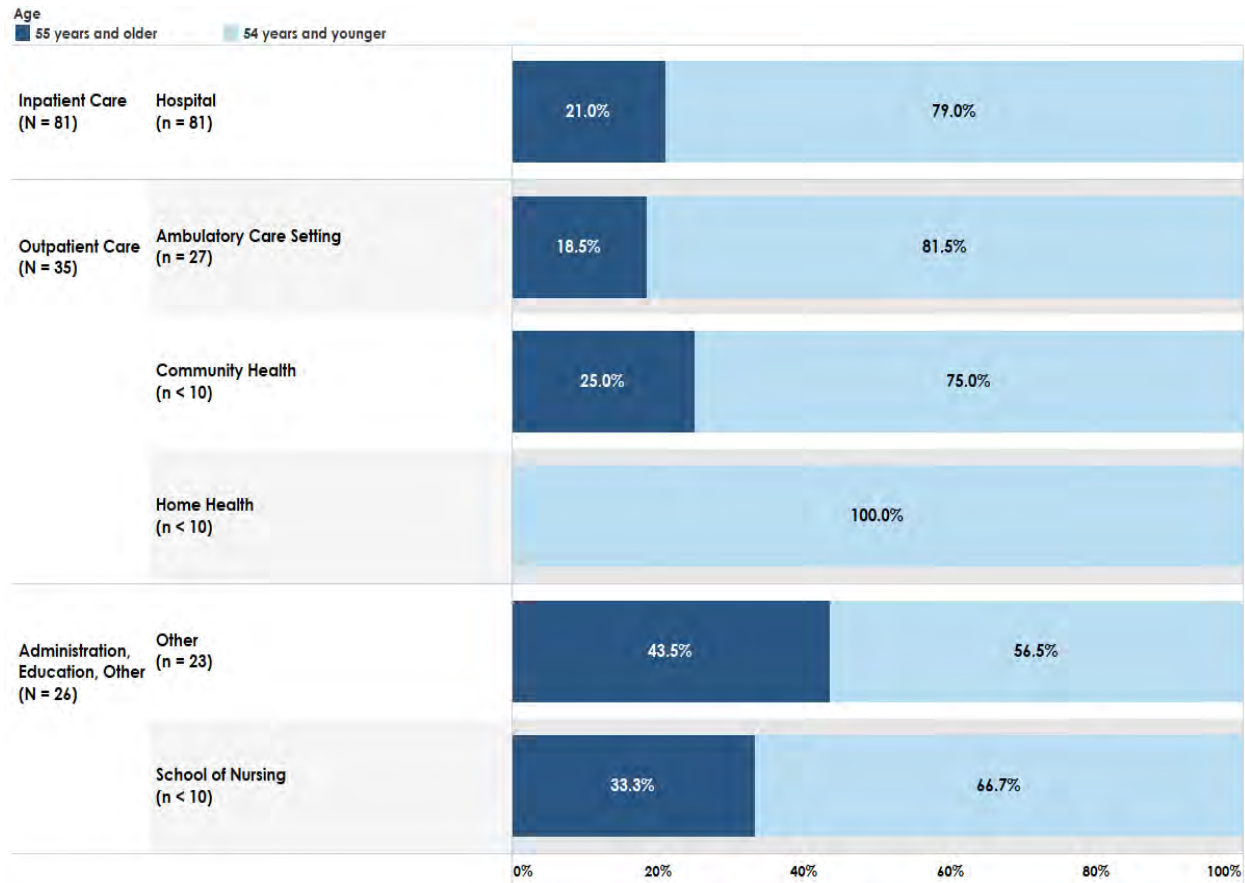
Missouri counties of Buchanan, Butler, Cape Girardeau, Clay, Franklin, Howell, Johnson, Lafayette, Lincoln, Marion, Perry, Pettis, Phelps, St. Charles, Saline, and Stoddard had 0% CNMs aged 55 years and older, and Cedar, Montgomery, Morgan, and Platte had the majority of the CNMs.

Figure 94. CNM Percentage of Nurses 55 Years and Older by County

Percent of CNMs 55 Years and Older

(n=19, N=93)   □ 21% - 28%   ■ None
□ 0%   ■ 29% - 49%
□ 1% - 20%   ■ 50% - 100%
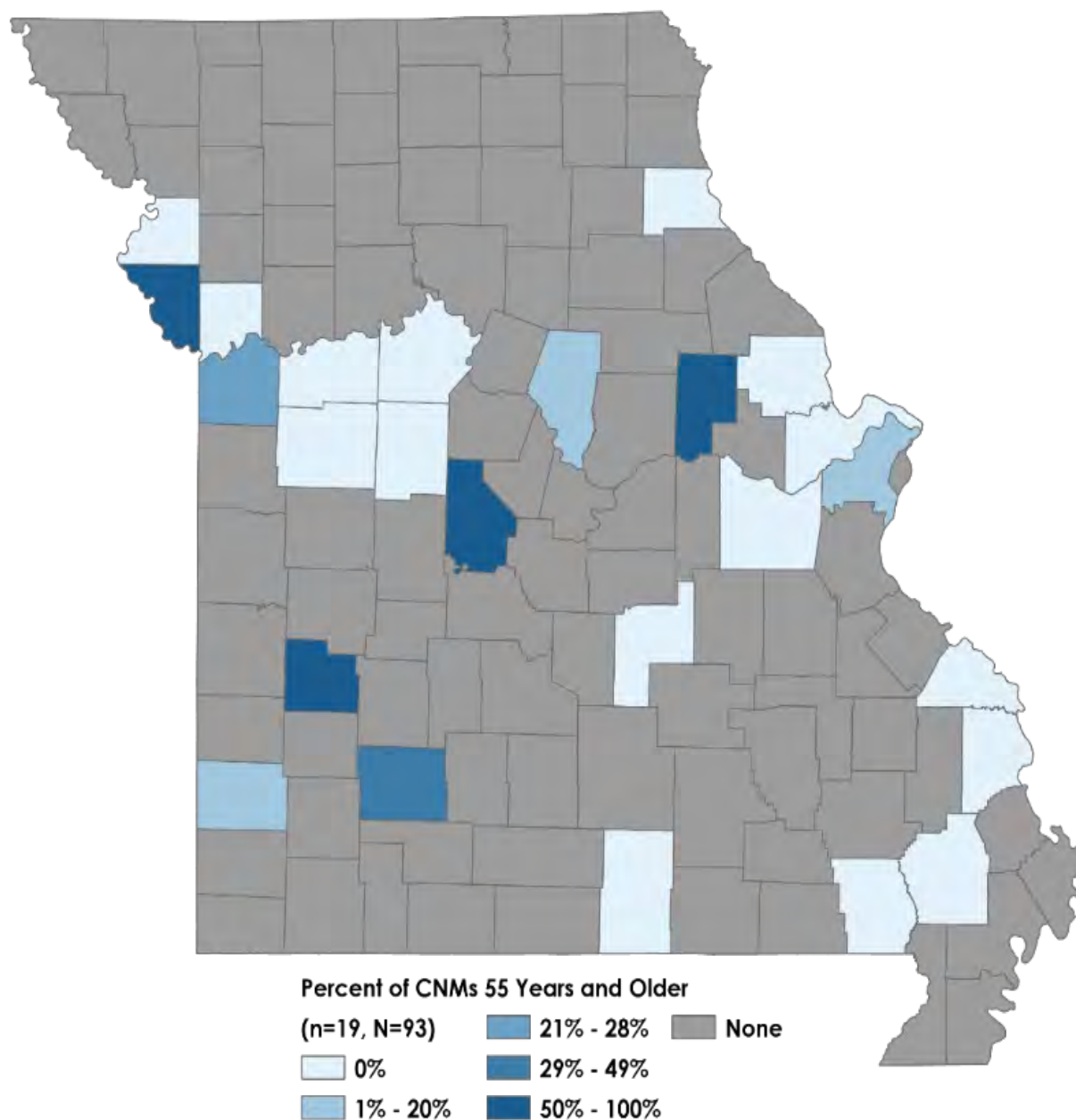
Missouri = 20.4%

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023

CNM Employment Characteristics

18.3%
(n = 26)

24.6%
(n = 35)

57.0%
(n = 81)

CNM
(N = 142)

Employment Setting Group
■ Inpatient
■ Outpatient
■ Administration, Education & Other
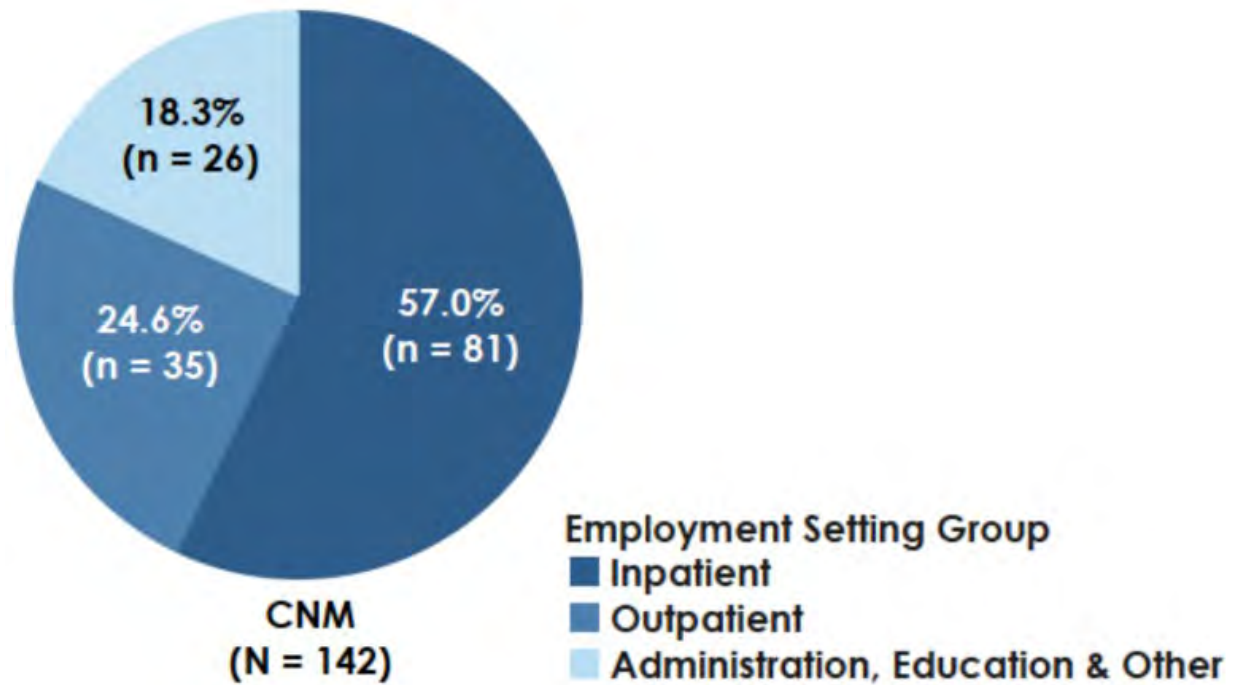
More than half of the CNM workforce was employed in inpatient settings (57%), with predominately employed in hospital settings (56.6%) and provided services to women and children in maternal, child, and women's health employment specialties (60.6%).

CNM Employment Setting

Employment Group	Employment Setting	
Inpatient (N = 81)	Hospital (n = 81)	56.6%
Outpatient (N = 35)	Ambulatory Care Setting (n = 27)	18.9%
	Community Health (n < 10)	2.8%
	Home Health (n < 10)	2.8%
Administration, Education, &Other (N = 26)	School of Nursing (n < 10)	2.1%
	Other (n = 23)	16.1%

(N = 143)
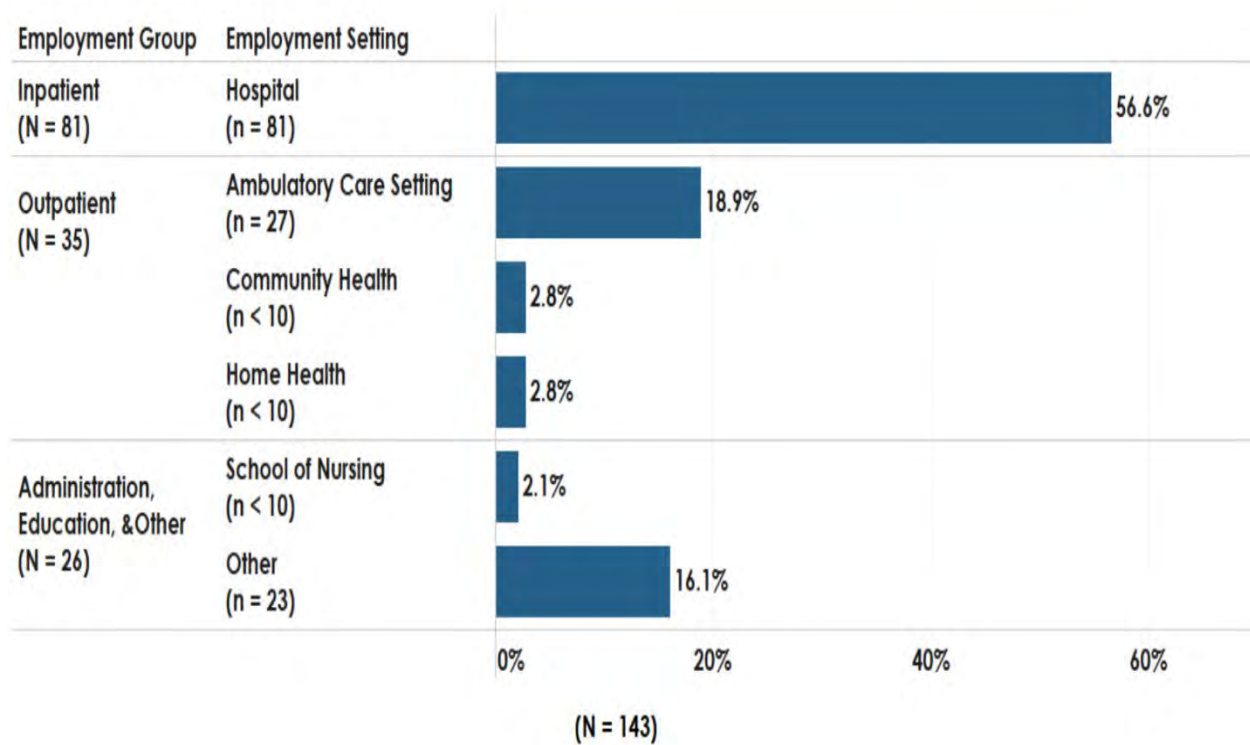
CNM Employment Specialty

More than half of the Missouri CNM workforce reported providing services in hospitals with 35% working in ambulatory care or administrative/educational settings.

With less than 10% reporting acute care, emergency, family health, medical-surgical, perioperative, or clinical specialties.

Figure 97. CNM Employment Specialty
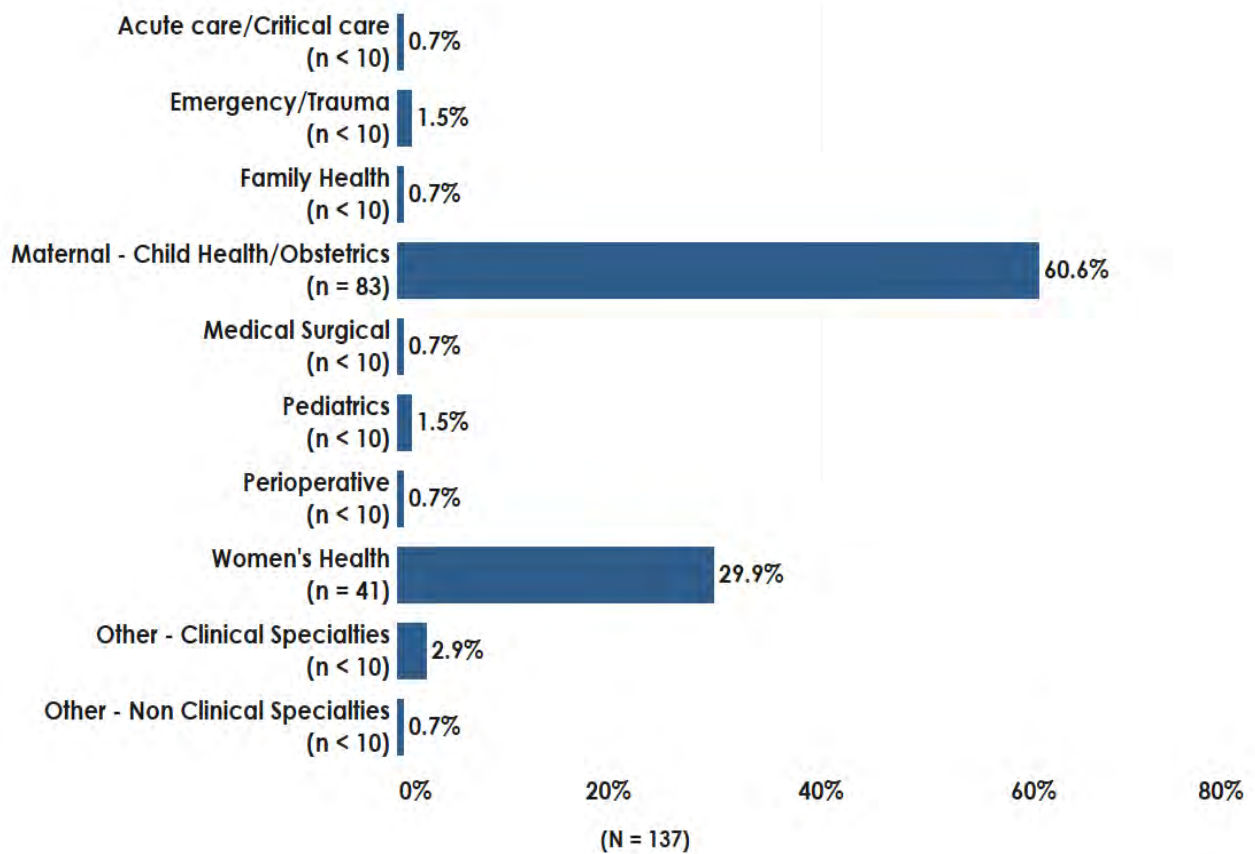
*Figure 97 does not include CNMs who did not indicate their employment specialty (N = 40).

CNM Employment Location by County

Figure 98 maps the percentage of CNMs employed in a county with a CNM license.

Most CNMs provide nursing services in metro or micro counties without any CNMs distributed in the northern counties and only a few southern counties further exacerbate the limited access to Missouri CNM services.

Clay County had the lowest rate with 0.077 per 10k and Morgan had the highest rate with 1.56 per 10k.

Figure 98. CNM Employment Location by County (County of Employment)

CNMs per 10,000 Female Population

(N = 89) ■ 1   ■ None
■ <1

Missouri = 0.24 CNMs per 10,000 Female Population

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Figure 99. CNM Employment Setting by County as a Rate per 10k

CNM in Inpatient Setting

(N=56) ▉ 1 ▉ None

▉ <1

Inpatient setting includes Hospital, Assisted Living Facility
and Nursing Home/Extended Care

CNM in Outpatient Setting

(N=24) ▉ 1 ▉ None

▉ <1

Outpatient setting includes Ambulatory Care, Home Health,
Community Health, Dialysis Center, Hospice
and Physician's Office/Primary Care

CNM in Admin, Education, Other Setting

(N=13) ▉ 1 ▉ None

▉ <1

Admin, Education, Other Setting includes Public Health,
Occupational Health, Insurance Claims/Benefits,
Policy/Planning/Regulatory/Licensing Agency,
School of Nursing and Other

CNM in Institutional Setting

▉ None

Institutional Setting includes Correctional Facility
and School Health Service

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

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Figure 100. CNM Number of Positions Held

CNM
(N = 142) | 83.1% | 16.2% | 0.7%

■ One ■ Two ■ Three

Figure 101. Position Description of CNMs

Position Description

Advanced Practice Nurse
(n = 103) — 72.5%

Staff Nurse
(n = 29) — 20.4%

Nurse Faculty
(n < 10) — 2.1%

Nurse Manager
(n < 10) — 2.1%

Other - Health Related
(n < 10) — 2.8%

0%   20%   40%   60%   80%

(N = 142)
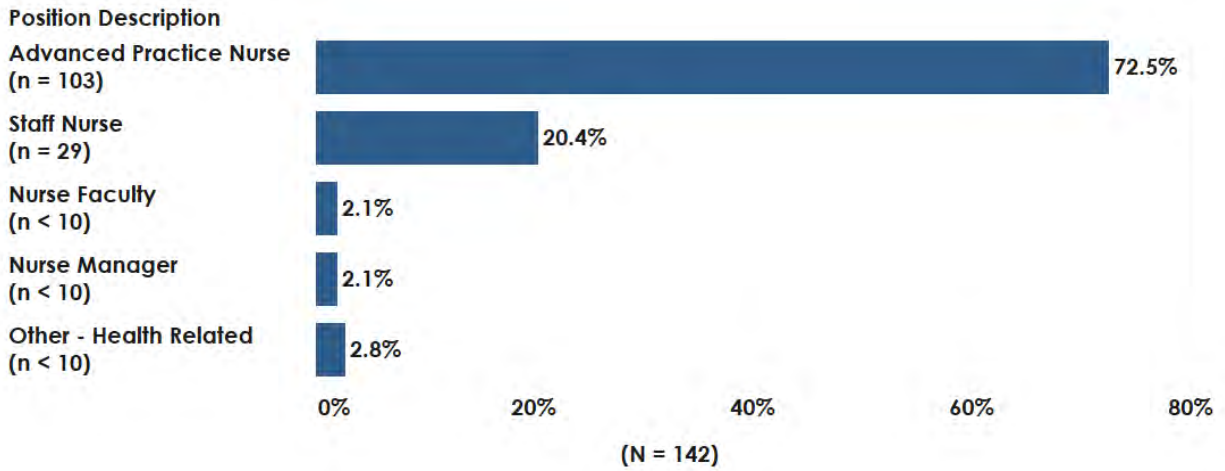
*Figure 101 does not include CNMs who did not indicate their position (N = 35).

CNM Average Hours

Figure 102. CNM Average Hours Working Per Week

9.9%
(n = 14)

22.5%
(n = 32)

21.8%
(n = 31)

45.8%
(n = 65)

CNM
(N = 143)

Average Hours Worked Weekly
■ 0-35
■ 36-40
■ 41-50
■ 51+

88
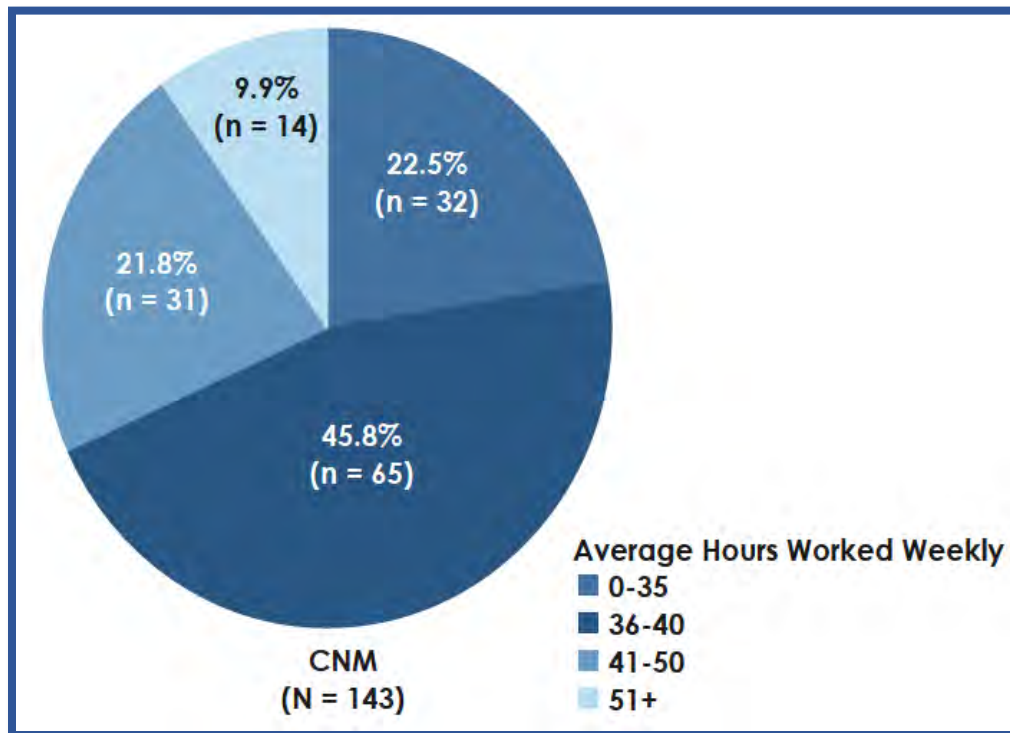
Public Health Nurses

The public health workforce comprised <1.5% of the total nursing workforce. Public Health Nurses were those whose primary or secondary employment setting was identified as "Public Health" or whose primary or secondary specialty was "Public Health."

Public Health Nurse Demographic Characteristics

Public Health Age Characteristics

The mean age of the public health workforce was approximately 46 (46.13) and the modal age was 40 (median 45). Most of the public health nurses were female (94.6%) with ages distributed proportionately ranging from 25-54.

Figure 119. Public Health Nurse Ages

Public Health Nurse Gender and Race and Ethnicity Characteristics

Figure 120. Public Health Nurses Gender Distribution
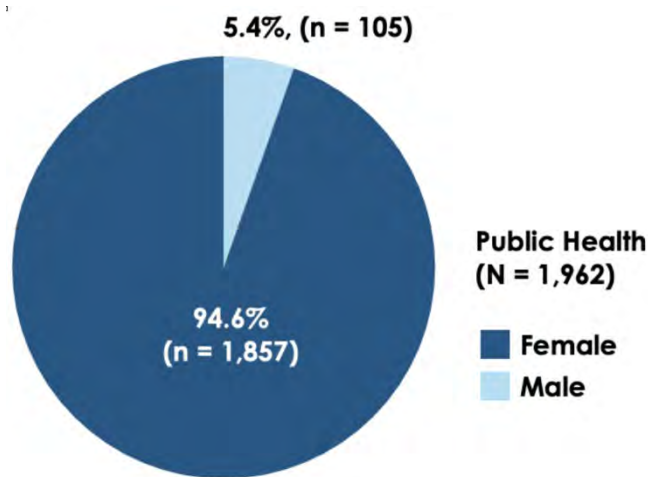
Figure 121. Public Health Nurse Race and Ethnicity
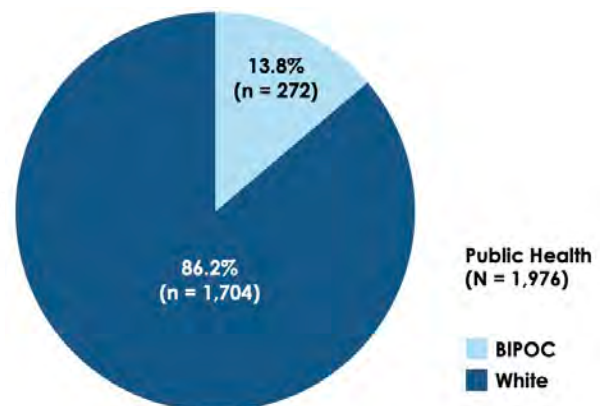
*Figures 119, 120, and 121 do not include those who did not indicate their age, gender, or race and ethnicity.

89
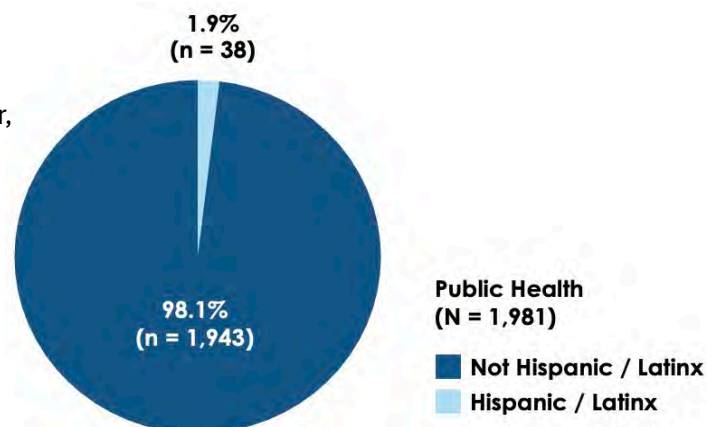
Public Health Nurses by Employment County and Employment Setting

Analysis of the 2023 Nursys data demonstrated that the public health workforce was largely dominated by those 54 years and younger with most of the workforce working in the inpatient and hospital setting. Twenty-nine percent of the workforce was 55 years and older.

Figure 122. Public Health Nurses Percentage of Nurses 55 Years and Older by Employment Setting
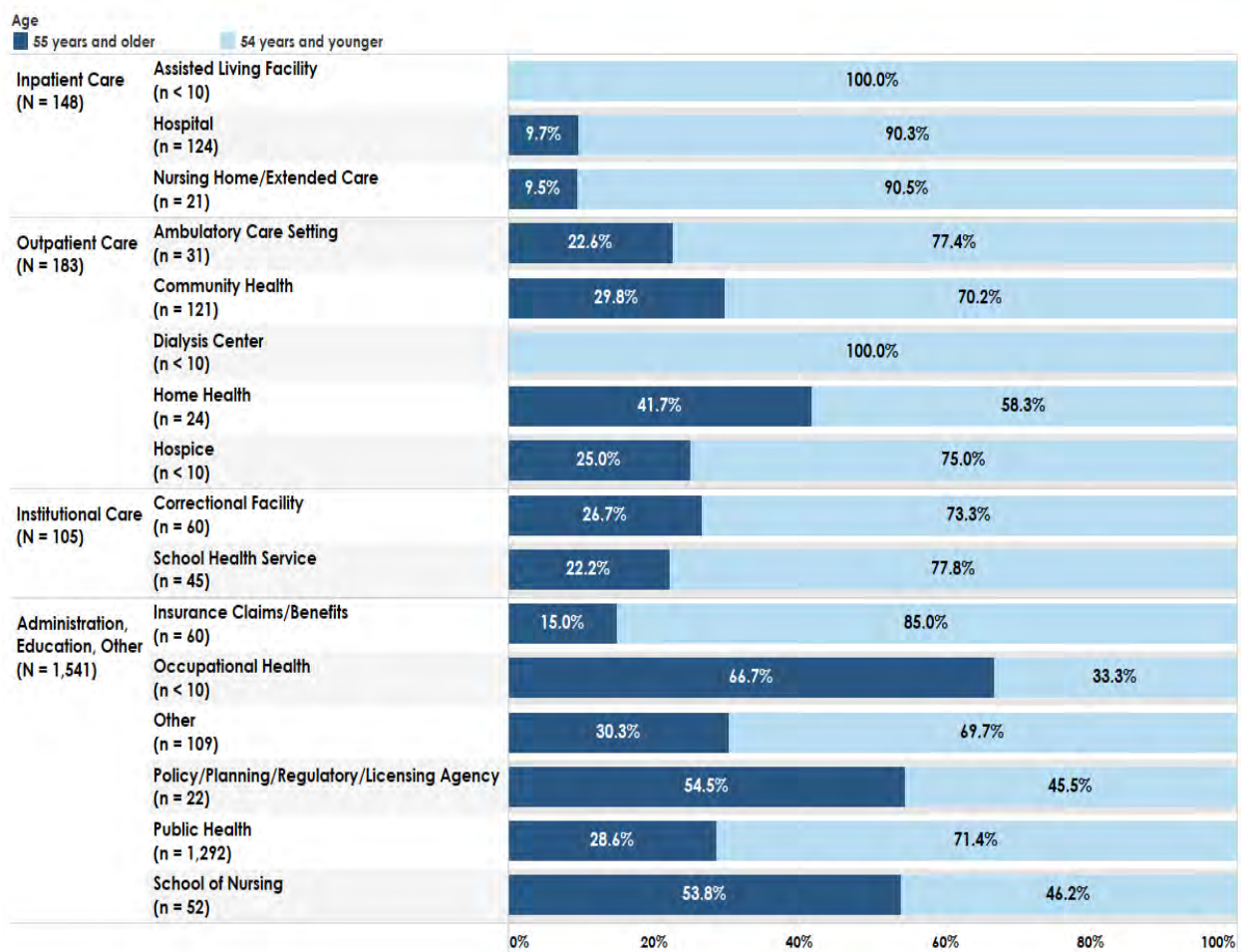
Figure 123 indicates most nurses working in Chariton, Dekalb, Ozark, and Sullivan were 55 years or older (100%). However, Andrew, Audrain, Crawford, Dallas, Dent, Gasconade, Gentry, Harrison, Henry, Hickory, Macon, Mercer, Miller, Mississippi, Oregon, Osage, Putnam, Ste. Genevieve, Scotland, and Shannon Counties had 0% of public health nurses of any age.

Figure 123. Public Health Nurse Percentage of Nurses 55 Years and Older by County of Employment
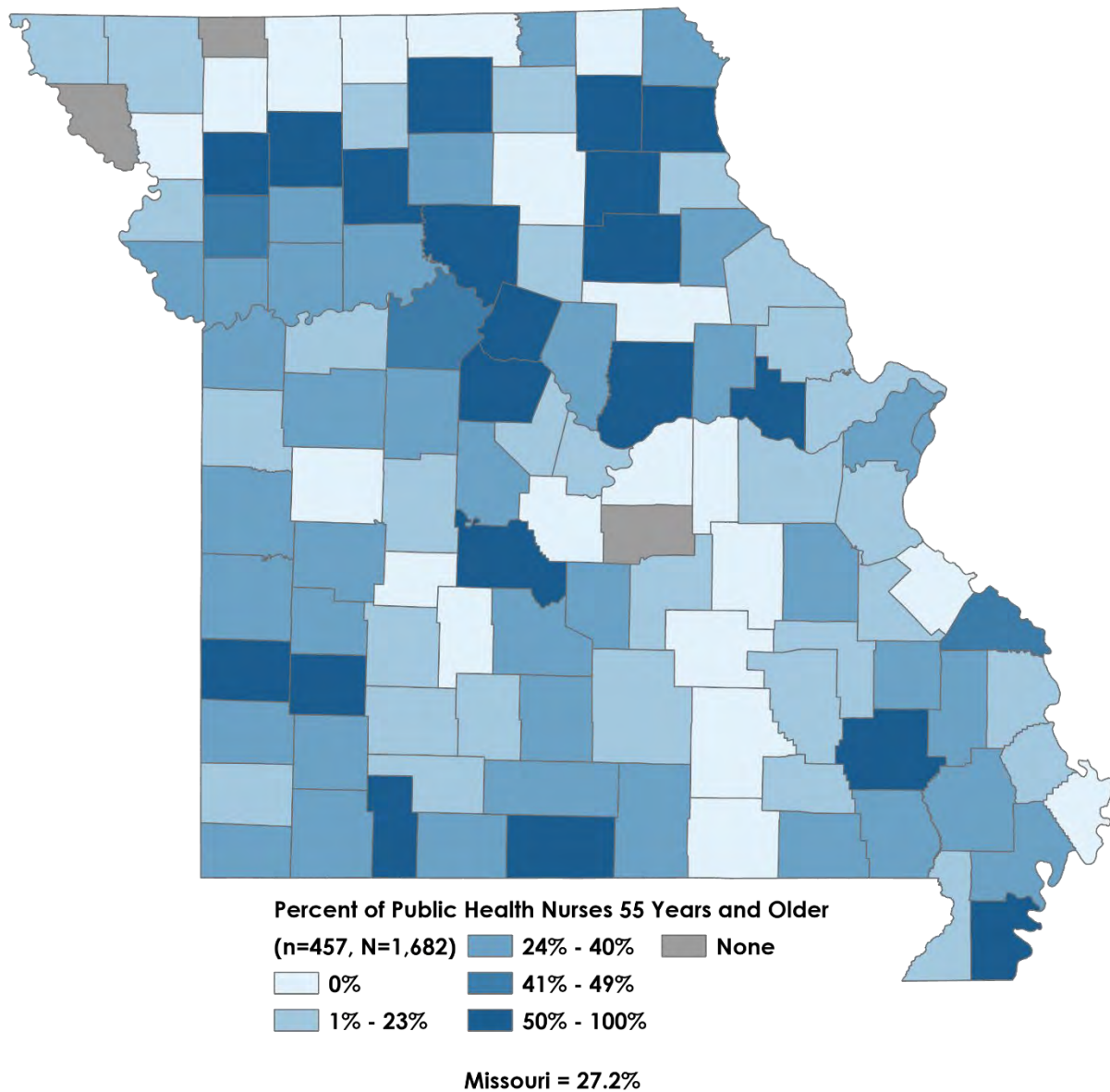
Percent of Public Health Nurses 55 Years and Older
(n=457, N=1,682)   24% - 40%   None
    0%   41% - 49%
    1% - 23%   50% - 100%

Missouri = 27.2%

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023

Public Health Nurse Education Characteristics

The majority of the public health nurses held a BSN (31%) with 10.9% earning an MSN exhibiting the higher education achieved by the public health nursing population.

Figure 124. Public Health Education Level Starting Education and Highest Education Level

Education Level	Degree Type	
Starting Education Level (N = 1,072)	Associate Degree-Nursing (N = 294)	14.8%
	Baccalaureate Degree-Nursing (N = 283)	14.3%
	Diploma-Nursing (RN) (N = 67)	3.4%
	Doctoral Degree-Nursing (DNP) (N < 10)	0.1%
	Master's Degree-Nursing (N = 42)	2.1%
	Vocational/Practical Certificate-Nursing (N = 385)	19.4%
Highest Education Level (N = 1,980)	LPN/VN Certificate (N = 464)	23.4%
	Nursing Associates Degree (N = 467)	23.6%
	Nursing Baccalaureate Degree (N = 614)	31.0%
	Nursing Diploma (N = 76)	3.8%
	Nursing Doctoral Degree (DNP) (N < 10)	0.1%
	Nursing Masters Degree (N = 216)	10.9%
	Other Associates Degree (N = 28)	1.4%
	Other Baccalaureate Degree (N = 40)	2.0%
	Other Doctoral Degree (N = 17)	0.9%
	Other Masters Degree (N = 57)	2.9%

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Public Health Nurses Employment Characteristics and Setting

Most public health nurses work in administrative settings (77.9%) providing public health services.

Figure 125. Public Health Nurse Employment Group Employment Setting

7.5%
(n = 148)

9.3%
(n = 183)

5.3%
(n = 105)

77.9%
(n = 1,541)

Public Health Nurse
(N = 1,977)

Employment Setting Group
- Inpatient
- Outpatient
- Institutional
- Administration, Education & Other
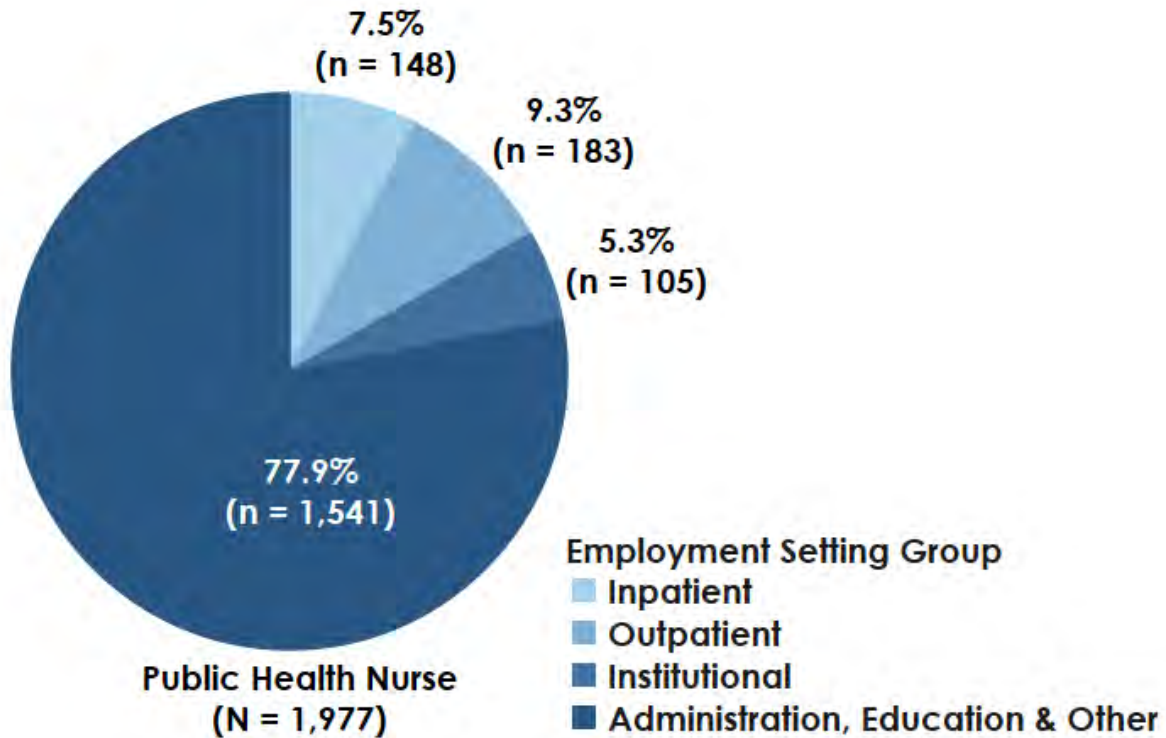
Figure 126. Public Health Nurse Employment Settings

Employment Group	Employment Setting	
Inpatient (N = 148)	Assisted Living Facility (n < 10)	0.2%
	Hospital (n = 124)	6.3%
	Nursing Home/Extended Care (n = 21)	1.1%
Outpatient (N = 183)	Ambulatory Care Setting (n = 31)	1.6%
	Community Health (n = 121)	6.1%
	Dialysis Center (n < 10)	0.2%
	Home Health (n = 24)	1.2%
	Hospice (n < 10)	0.2%
Institutional (N = 105)	Correctional Facility (n = 60)	3.0%
	School Health Service (n = 45)	2.3%
Administration, Education, & Other (N = 1,541)	Insurance Claims/Benefits (n = 60)	3.0%
	Occupational Health (n < 10)	0.3%
	Other (n = 109)	5.5%
	Policy/Planning/Regulatory/Licensing Agency (n = 22)	1.1%
	Public Health (n = 1,292)	65.2%
	School of Nursing (n = 52)	2.6%

(N = 1,977)

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Public Health Nurse Employment Specialty

The majority of the public health workforce provides services in public health (56.1%) whereas over 20% reported specialties as family health (8.3%), community (4.5%), and psychiatric services in mental health or behavioral health (4.7%), and pediatrics (4.3%)

Figure 127. Public Health Nurse Employment Specialty

Specialty	Percentage
Acute care/Critical care (n = 37)	1.9%
Adult Health (n = 61)	3.1%
Cardiology (n = 12)	0.6%
Community (n = 87)	4.5%
Emergency/Trauma (n = 28)	1.4%
Family Health (n = 161)	8.3%
Geriatric/Gerontology (n = 31)	1.6%
Home Health (n = 10)	0.5%
Maternal - Child Health/Obstetrics (n = 40)	2.1%
Medical Surgical (n = 22)	1.1%
Neonatal (n < 10)	0.2%
Nephrology (n < 10)	0.3%
Occupational health (n < 10)	0.2%
Oncology (n < 10)	0.4%
Palliative Care/Hospice (n < 10)	0.2%
Pediatrics (n = 84)	4.3%
Perioperative (n = 10)	0.5%
Psychiatric/Mental Health/Substance Abuse (n < 10)	4.7%
Public Health (n = 1,089)	56.1%
Rehabilitation (n < 10)	0.5%
School Health (n = 31)	1.6%
Women's Health (n = 44)	2.3%
Other - Clinical Specialties (n = 57)	2.9%
Other - Non Clinical Specialties (n = 14)	0.7%

(N = 1,942)

Public Health Nurse Employment Location by County

Figure 128 maps the public health nurses employed in a county at a rate per population of 10k. Most public health nurses provide nursing services in metro or micro counties without any public health nurses distributed in three of the Missouri counties. Atchison had the most public health nurses with 11.58 per 10k and Lincoln had the least with 0.79 per 10k.

Figure 128. Public Health Nurse Employment Location by County (County of Employment)

Public Health Nurses per 10,000
(N = 1,682)   ☐ 3 - 4   ☐ 7 - 9   ☐ None
☐ 1 - 2   ☐ 5 - 6   ☐ 10 - 12
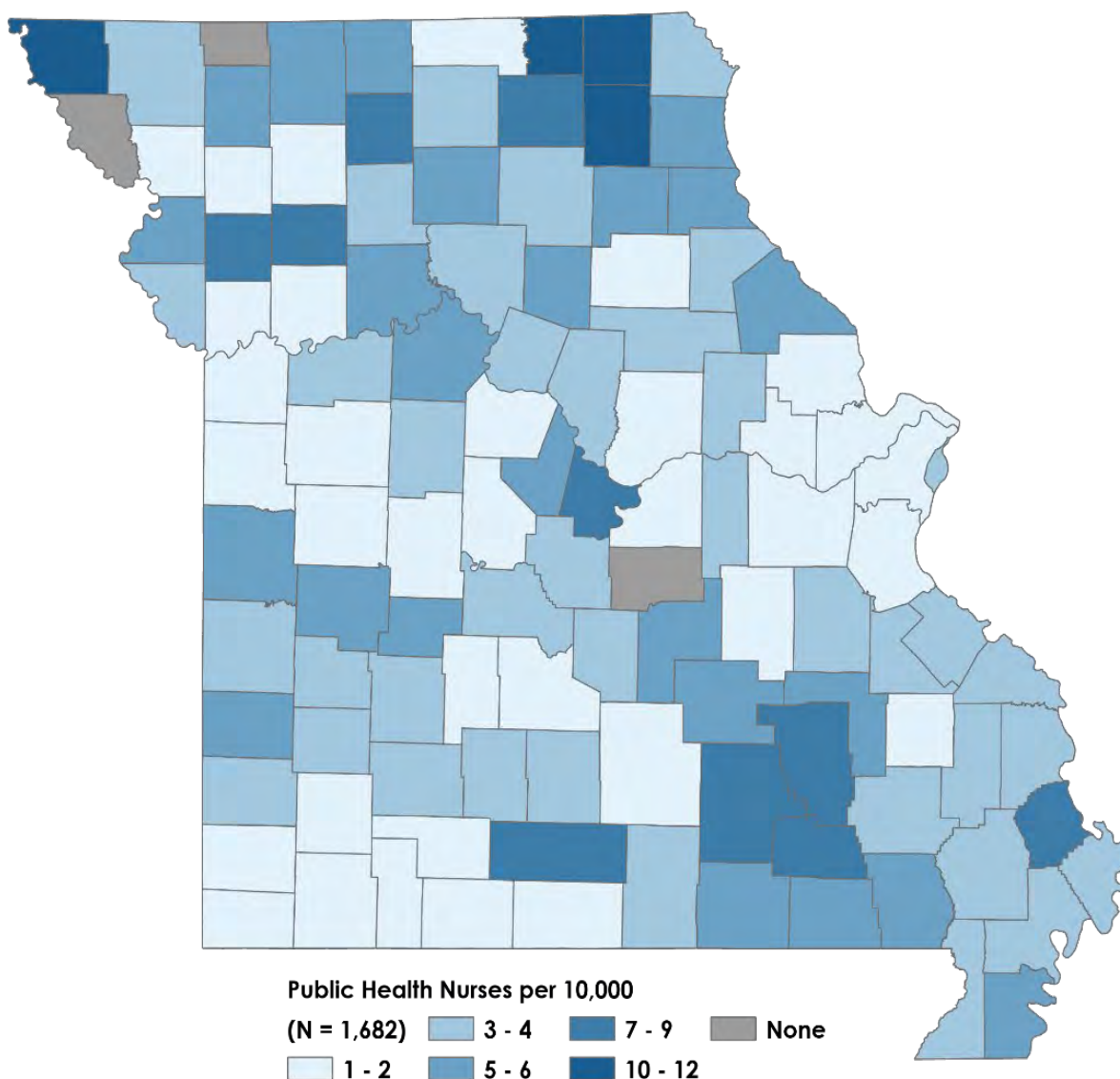
Missouri = 3 Public Health Nurses per 10,000

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Figure 129. Public Health Nurse Employment Setting as a Rate per 10k

Public Health Nurses in Inpatient Setting
(N=2,912) ☐ 1 ■ 2 ■ None
☐ <1

Inpatient setting includes Hospital, Assisted Living Facility
and Nursing Home/Extended Care

Public Health Nurses in Outpatient Setting
(N=157) ☐ 1 ■ 3 ■ None
☐ <1 ■ 2

Outpatient setting includes Ambulatory Care, Home Health,
Community Health, Dialysis Center, Hospice
and Physician's Office/Primary Care

**Public Health Nurses in Admin, Education, Other
Setting**
(N=1,307) ☐ 2 - 3 ■ 6 - 7 ■ None
☐ <1 - 1 ■ 4 - 5 ■ 8 - 10

Admin, Education, Other Setting includes Public Health,
Occupational Health, Insurance Claims/Benefits,
Policy/Planning/Regulatory/Licensing Agency,
School of Nursing and Other

Public Health Nurses in Institutional Setting
(N=91) ■ 1 ■ None
☐ <1

Institutional Setting includes Correctional Facility
and School Health Service

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Analysis of the survey results reveals that 1 in 5 (20%) of public health nurses reported being employed in more than one position, indicating a possible financial need for more than one job, which informs public health workforce policymakers to address the workforce challenges of ensuring a stable, productive public health nursing workforce.

Figure 130. Public Health Nurse Number of Positions Held

Public Health (N = 1,676)

One	Two	Three
81.3%	16.9%	1.9%

Figure 131. Position Description of Public Health Nurses

Advanced Practice Nurse (n = 102)
Case Manager (n = 142)
Nurse Executive (n = 41)
Nurse Faculty (n = 62)
Nurse Manager (n = 157)
Nurse Researcher (n = 16)
Nursing Consultant (n = 56)
Staff Nurse (n = 1,164)
Other - Health Related (n = 230)
Other - Not Health Related (n < 10)

(N = 1,975)
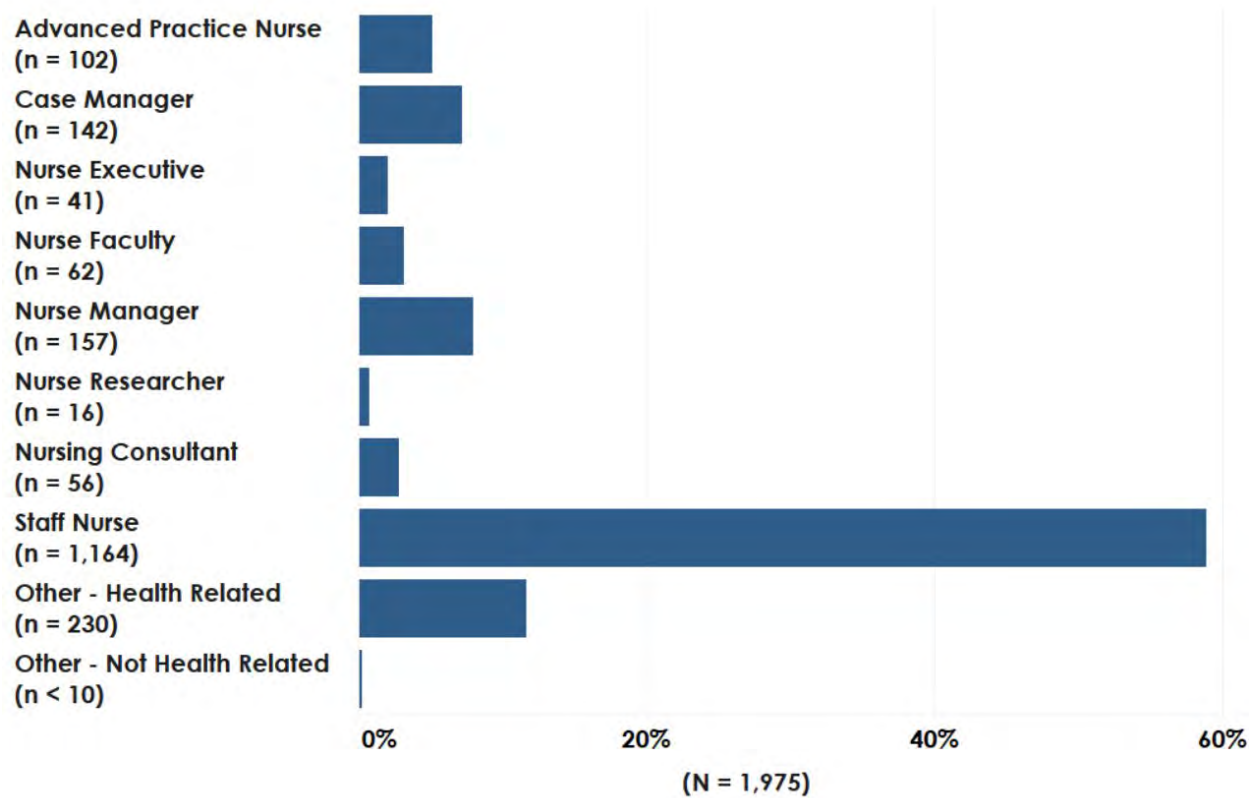
Figure 132. Public Health Nurse Average Hours Working Per Week

5.0% (n = 98)
11.3% (n = 223)
18.7% (n = 370)
65.0% (n = 1,285)

Public Health (N = 1,976)

Average Hours Worked Weekly
- 0-35
- 36-40
- 41-50
- 51+
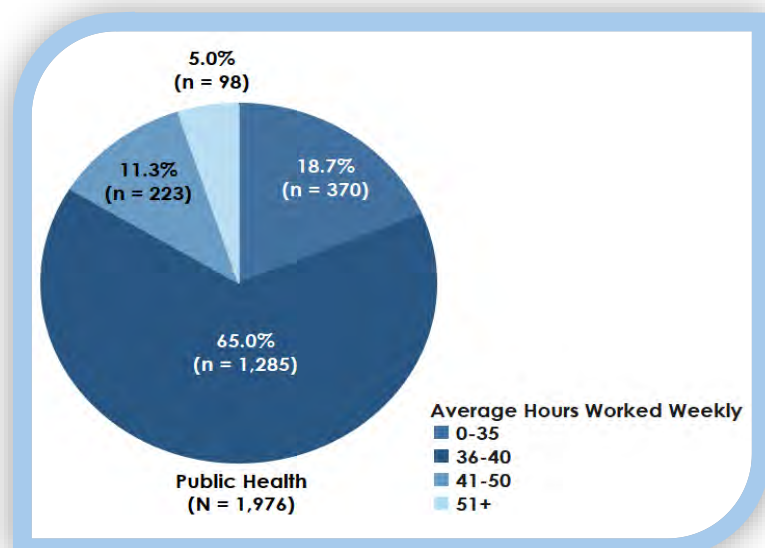
Maternal-Child Health/Obstetric Nurse

The Maternal-Child Health/Obstetric nurses comprised approximately 3% of the total nursing workforce.

Maternal-Child Health/ Obstetric Nurse Demographic Characteristics

Maternal-Child Health/ Obstetric Nurse Age Characteristics

The mean age of the workforce was 41.5, with a modal age of 35. The majority of the workforce was distributed among age cohorts from 25-34 (29.8%) and 35-44 (26.5%).

Figure 133. Maternal-Child Nurses Age Distribution

Most nurses were white (91.6%) females (99.3%) and not Hispanic/Latinx (97.2%).

Maternal-Child Health/Obstetric Nurse Gender, Race, and Ethnicity Characteristics

Figure 134. Maternal-Child/Obstetric Nurses Gender and Race and Ethnicity Distribution
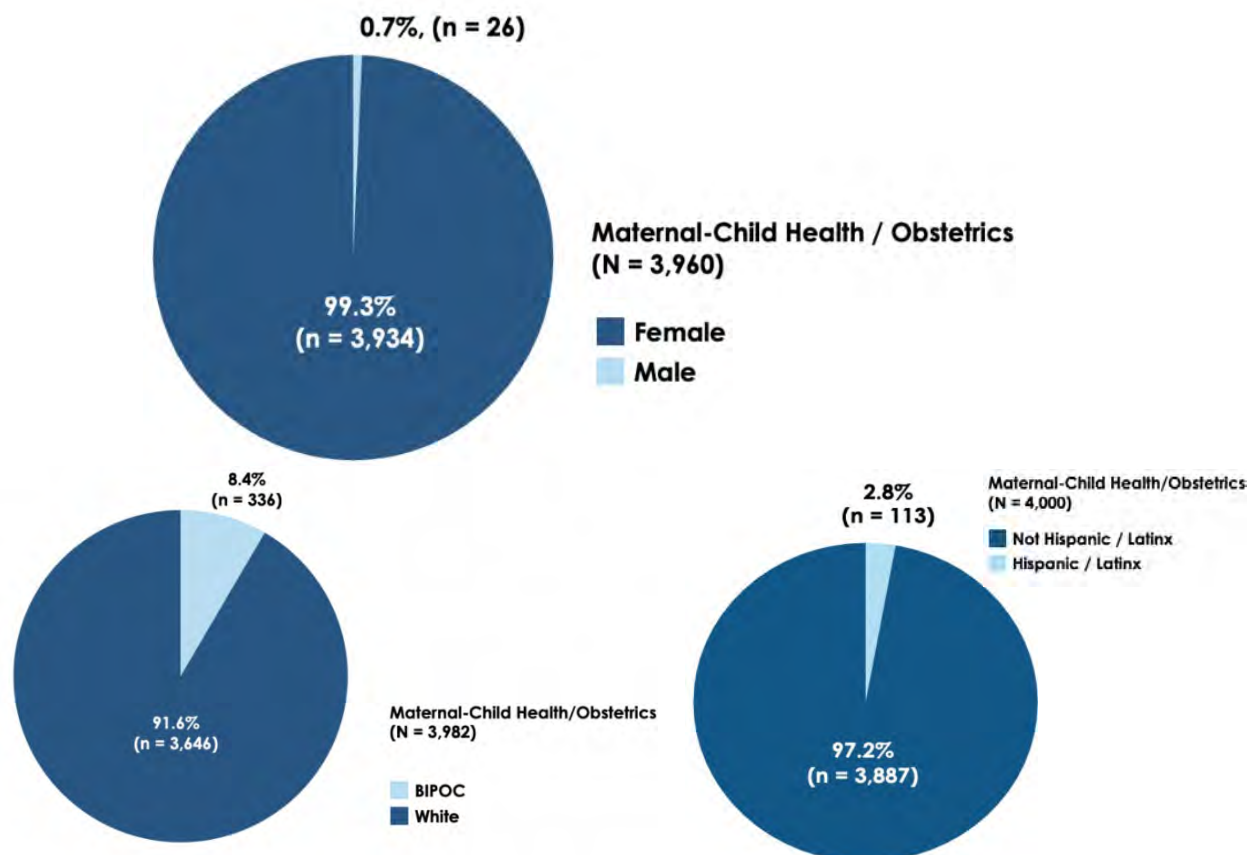
*Figure 134 does not include those who did not indicate their gender (N= 38).

Maternal-Child Health/Obstetrics by Employment County and Employment Setting Characteristics

Maternal-Child/Obstetrics Nurses were identified by those whose Primary or Secondary Specialty was reported as 'Maternal – Child Health/Obstetrics', then of those nurses, the report reflects the nursing population by primary specialty of 'Maternal – Child Health/Obstetrics', totaling 4,000. The total identified in the report excluded those respondents without maternal-child/obstetrics nursing as their primary specialty (n = 3,995).

The data represents what each nurse reported in the Nursys survey. Nurses may hold multiple positions and/or practice in a setting not typically associated with their license type. However, this occurred in rare circumstances as exhibited by the small number of nurses practicing in different settings from the inpatient hospital setting.

Analysis of the 2023 Nursys data demonstrated that the maternal-child workforce was largely made up of those 54 years and younger with most of the workforce working in the nursing home/extended care and hospital settings.

Figure 135. Maternal-Child Health Percentage of Nurses 55 Years and Older by Employment Setting
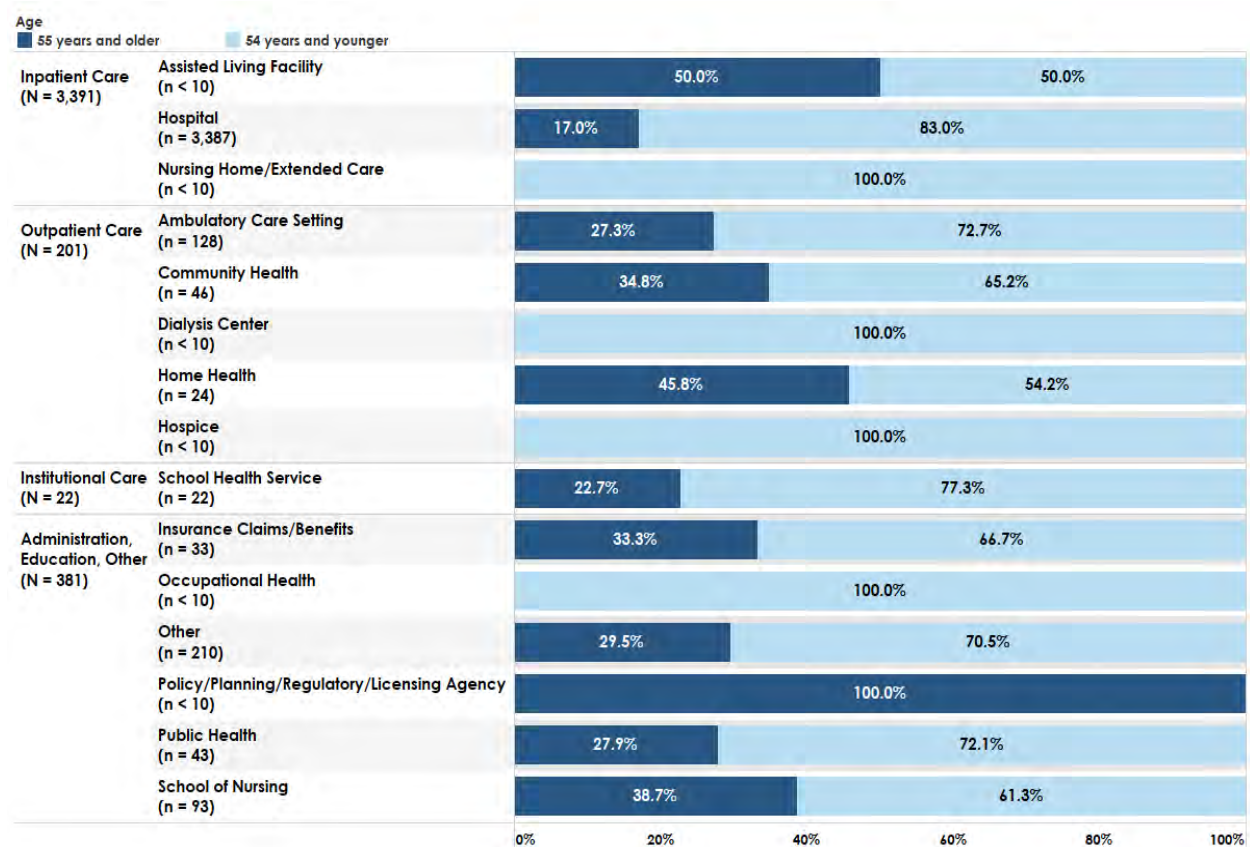
Figure 136 shows the maternal-child health/obstetrics nurses employed in each county per a rate of 10k of the female population. Lafayette, Morgan, and Ray counties indicate that 100% of the maternal-child health/obstetric workforce was 55 years of age and older. However, Bates, Benton, Callaway, Cedar, Chariton, Cooper, Douglas, Gentry, Grundy, Howard, Mississippi, Moniteau, New Madrid, Newton, Oregon, Ralls, Ripley, Stoddard, Washington, and Webster counties have 0 maternal-child health/obstetric nurses.

Figure 136. Maternal-Child Health/Obstetrics Nurse Percentage of Nurses 55 Years and Older by County of Employment

Percent of Maternal-Child Health/Obstetrics Nurses 55 Years and Older

(n=612, N=3,382)
0% - 4%
5% - 16%
17% - 27%
28% - 49%
50% - 100%
None
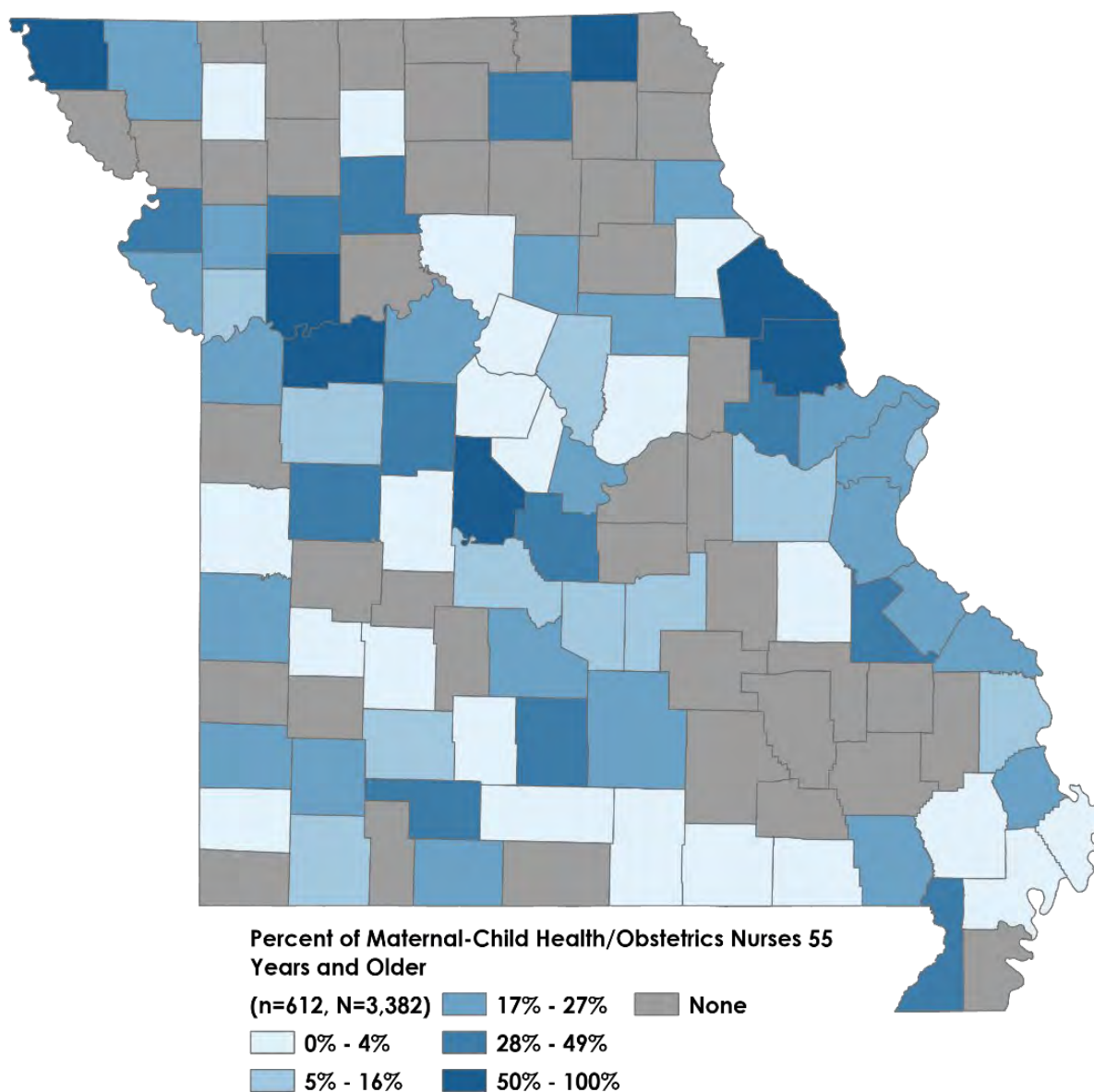
Missouri = 18.1%

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023

Maternal-Child Health/Obstetric Nurse Education Characteristics

More than half of the maternal-child health nurses reported a BSN degree (57.2%) and 11.9% a MSN demonstrating that almost 70% of the nurses earned a higher education.

Figure 137. Maternal-Child Health/ Obstetrics Nurse Education Level Starting Education and Highest Education Level

Education Level	Degree Type	
Starting Education Level (N = 2,441)	Associate Degree-Nursing (n = 650)	16.2%
	Baccalaureate Degree-Nursing (n = 1,407)	35.2%
	Diploma-Nursing (RN) (n = 149)	3.7%
	Doctoral Degree-Nursing (DNP) (n = 3)	0.1%
	Doctoral Degree-Nursing (PhD) (n = 1)	0.0%
	Master's Degree-Nursing (n = 56)	1.4%
	Vocational/Practical Certificate-Nursing (n = 175)	4.4%
Highest Education Level (N = 4,000)	LPN/VN Certificate (n = 120)	3.0%
	Nursing Associates Degree (n = 829)	20.7%
	Nursing Baccalaureate Degree (n = 2,289)	57.2%
	Nursing Diploma (n = 157)	3.9%
	Nursing Doctoral Degree (DNP) (n = 3)	0.1%
	Nursing Masters Degree (n = 478)	11.9%
	Other Associates Degree (n = 11)	0.3%
	Other Baccalaureate Degree (n = 51)	1.3%
	Other Doctoral Degree (n = 9)	0.2%
	Other Masters Degree (n = 52)	1.3%
	Other Nursing Doctoral Degree (n = 1)	0.0%

Maternal-Child Health/Obstetric Nurse Employment Characteristics

Almost 85% of maternal-child health nurses work in inpatient employment settings in staff nurse positions (83.8%). Very few nurses reported working in other settings.

Figure 138. Maternal-Child Health/Obstetric Nurse Employment Group by Employment Setting

9.5%
(n = 381)

0.6%
(n = 22)

5.0%
(n = 201)

84.9%
(n = 3,391)

Maternal - Child Health/Obstetrics
(N = 3,995)

Employment Setting Group
- Inpatient
- Outpatient
- Institutional
- Administration, Education & Other
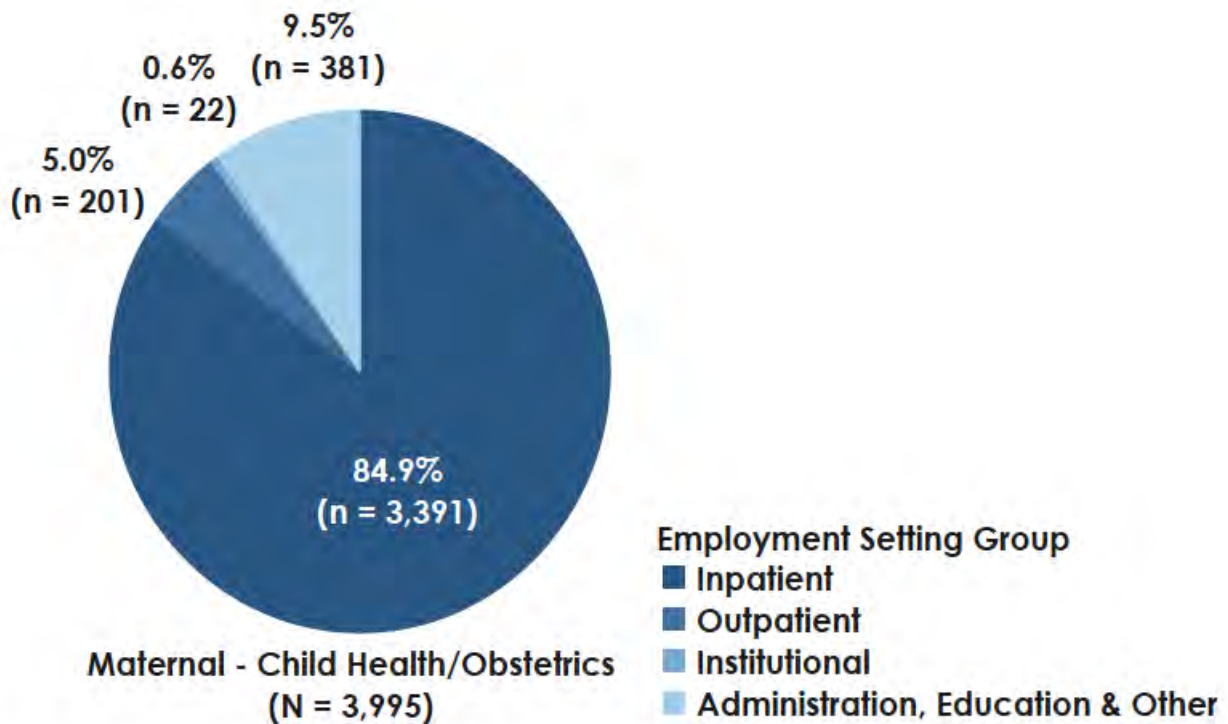
* Figures 138 and 139 do not include nurses who did not indicate their employment setting (n < 10).

Figure 139. Maternal-Child Health/Obstetric Nurse Employment Setting

Employment Group	Employment Setting	
Inpatient (N = 3,391)	Hospital (n = 3,387)	84.7%
Outpatient (N = 201)	Ambulatory Care Setting (n = 128)	3.2%
	Community Health (n = 46)	1.1%
	Home Health (n = 24)	0.6%
Institutional (N = 22)	School Health Service (n = 22)	0.5%
Administration, Education, & Other (N = 381)	Insurance Claims/Benefits (n = 33)	0.8%
	Public Health (n = 43)	1.1%
	School of Nursing (n = 93)	2.3%
	Other (n = 210)	5.2%

(N = 3,995)
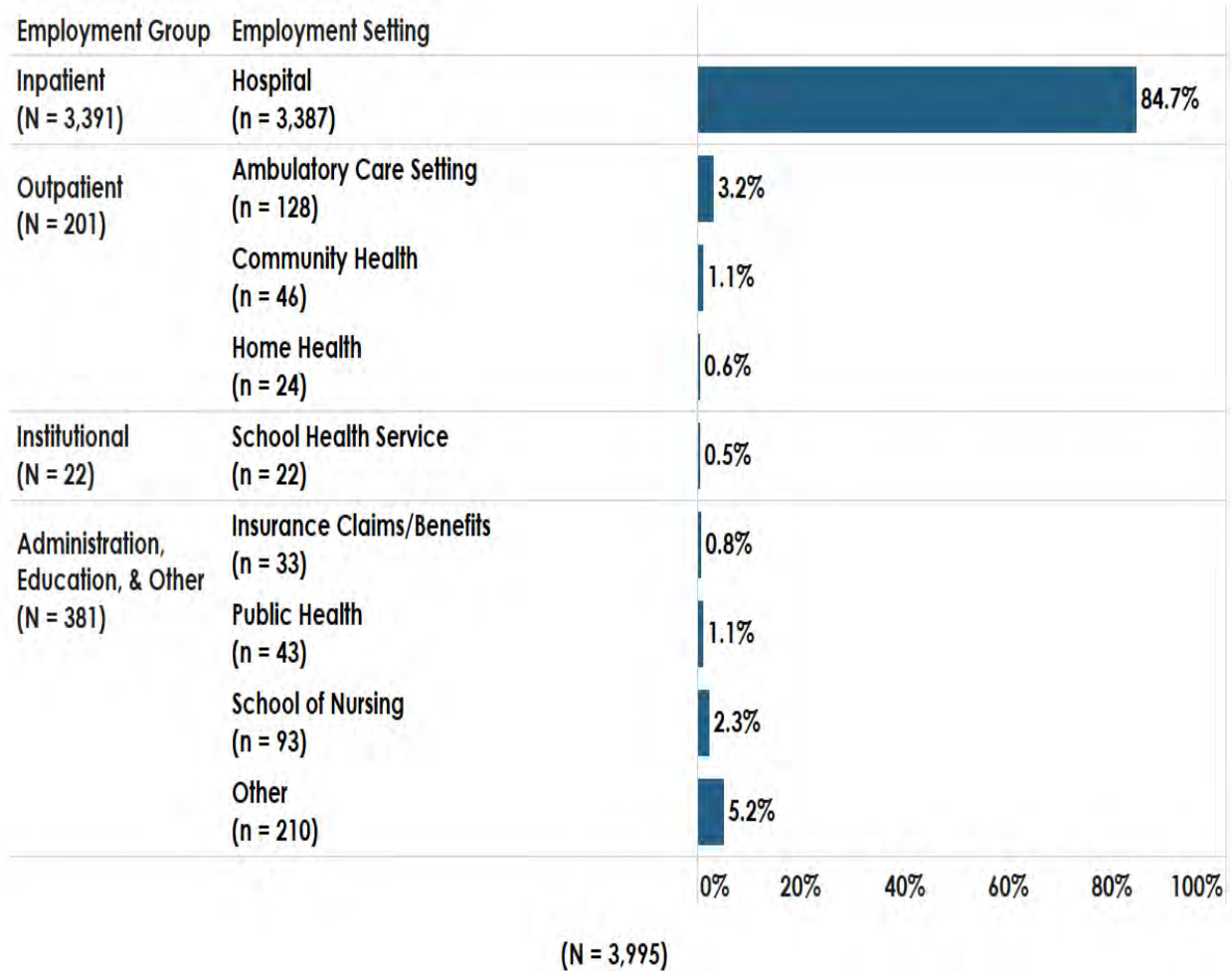
Maternal-Child Health/Obstetric Nurse Employment Location by County

Figure 140 maps the percentage of nurses employed in a county per the female population at a rate of 10k. Livingston had the most with 20.41 per 10k, and Callaway County had the least with 0.47 per 10k.

The mapping demonstrates a comprehensive view of the places that provide care to women and children and the related care across Missouri.

With 41 counties with no maternal-child health/obstetric nurses, understanding the distribution assists policymakers in determining the maldistribution of the workforce and addressing workforce shortages.

Maternal-Child Health/Obstetrics Nurses per 10,000 Female Population

(N = 3,382)

10 - 13	None	
<1 - 4	14 - 17	
5 - 9	18 - 20	

Missouri = 6 Maternal-Child Health/Obstetrics Nurses per 10,000 Female Population

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Figure 141. Maternal-Child Health/Obstetrics Employment Setting Group as a Rate per 10k

Maternal-Child Health/Obstetrics Nurses in Inpatient Setting

(N=2,912) — 2 - 3, 6 - 7, None, <1 - 1, 4 - 5, 8 - 10

Inpatient setting includes Hospital, Assisted Living Facility and Nursing Home/Extended Care

Maternal-Child Health/Obstetrics Nurses in Outpatient Setting

(N=159) — 1, None, <1

Outpatient setting includes Ambulatory Care, Home Health, Community Health, Dialysis Center, Hospice and Physician's Office/Primary Care

Maternal-Child Health/Obstetrics Nurses in Admin, Education, Other Setting

(N=285) — 1, 3, None, <1, 2, 4

Admin, Education, Other Setting includes Public Health, Occupational Health, Insurance Claims/Benefits, Policy/Planning/Regulatory/Licensing Agency, School of Nursing and Other

Maternal-Child Health/Obstetrics Nurses in Institutional Setting

(N=22) — 1, None, <1

Institutional Setting includes Correctional Facility and School Health Service

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

Figure 142. Maternal-Child Health/Obstetric Nurses Number of Positions held

Maternal - Child Health/Obstetrics (N = 3,993)

89.6%	9.8% 0.7%

■ One ■ Two ■ Three
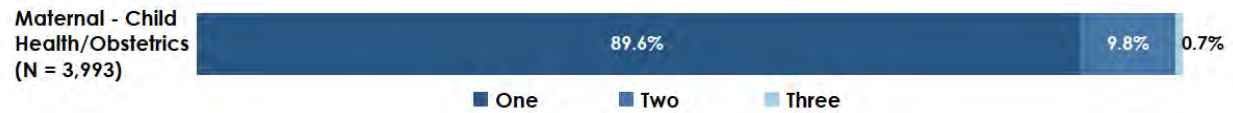
Figure 143. Position Description of Maternal-Child Health/Obstetric Nurses

Position	Percentage
Advanced Practice Nurse (n = 129)	3.2%
Case Manager (n = 76)	1.9%
Nurse Executive (n = 19)	0.5%
Nurse Faculty (n = 137)	3.4%
Nurse Manager (n = 143)	3.6%
Nurse Researcher (n < 10)	0.1%
Nursing Consultant (n = 29)	0.7%
Staff Nurse (n = 3,330)	83.8%
Other - Health Related (n = 103)	2.6%
Other - Not Health Related (n < 10)	0.0%

(N = 3,972)
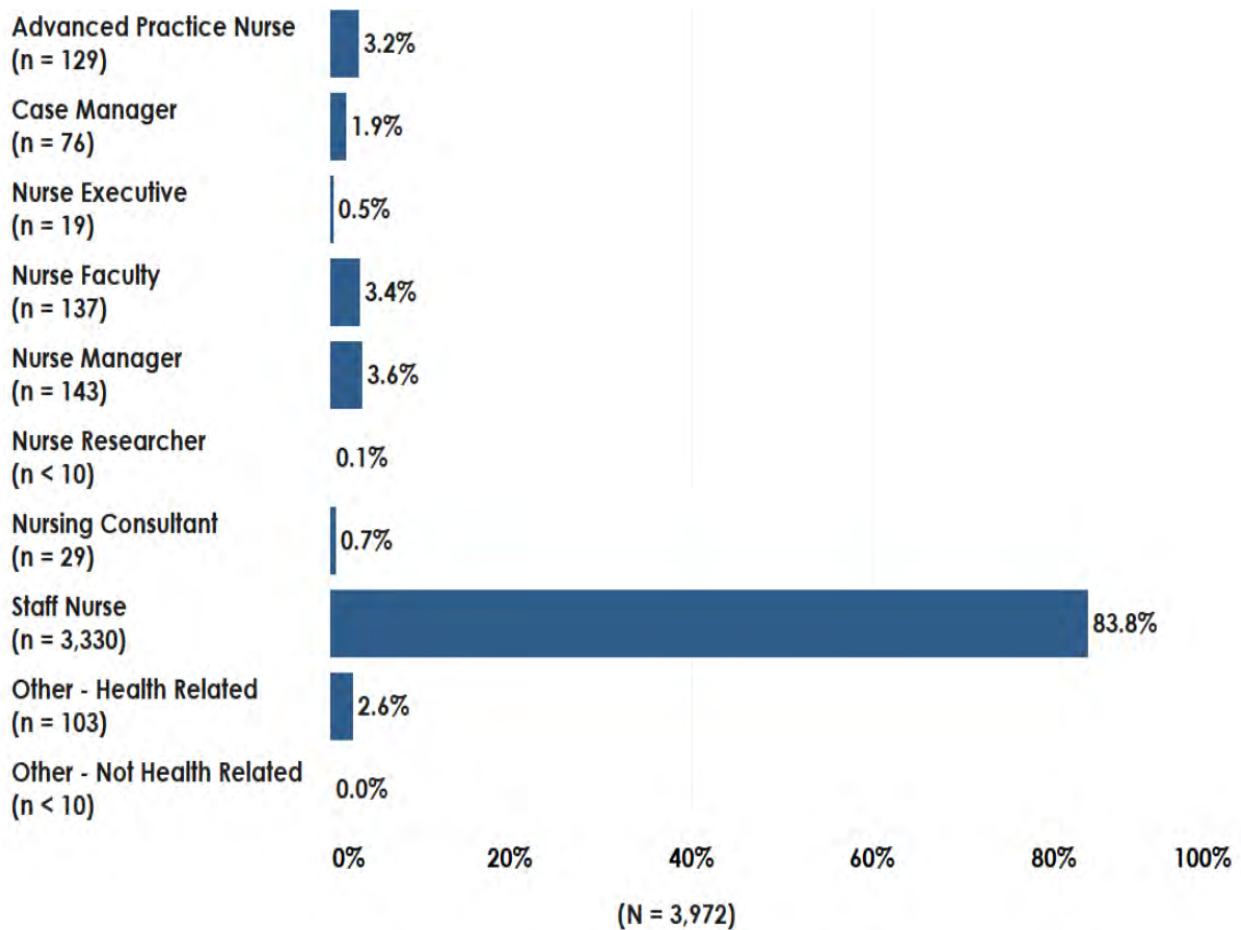
*Figure 143 does not include those who did not indicate their employment position (n = 28).

6.7%
(n = 268)

2.3%
(n = 90)

20.6%
(n = 821)

70.5%
(n = 2,814)

Maternal - Child Health/Obstetrics
(N = 3,993)

Average Hours Worked Weekly
- 0-35
- 36-40
- 41-50
- 51+
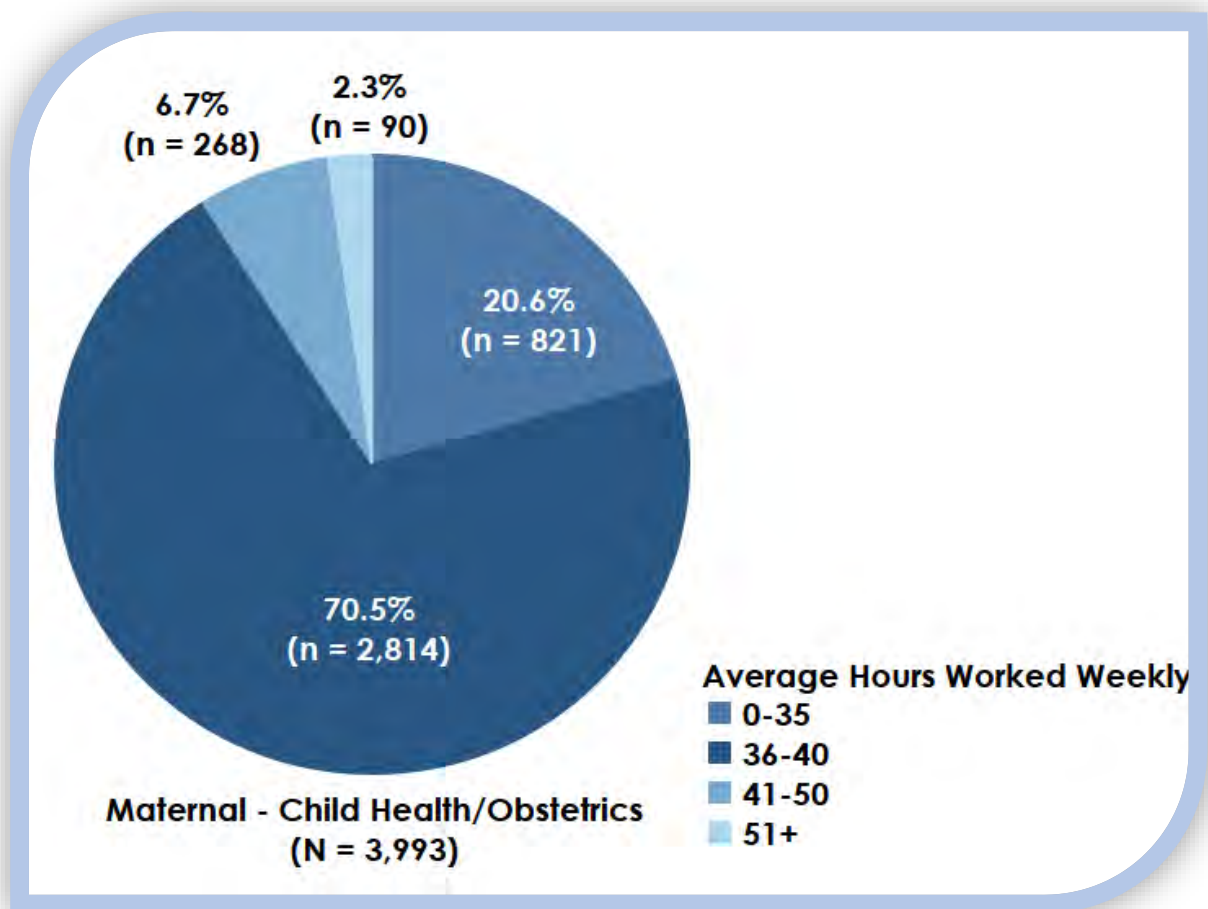
School Nurse

The school nursing workforce comprised slightly more than 2% of the total nursing workforce.

School Nurse Demographic Characteristics

School Nurse Age Characteristics

The mean age of the school nursing workforce was almost 50 years (49.24) with a modal age of 41. The school nursing workforce was proportionately distributed among age cohorts from 25-64.

Figure 145. School Nurse Age Distribution

School Nurses (N = 2,934): 17-24: 0.4% | 25-34: 11.2% | 35-44: 27.3% | 45-54: 27.1% | 55-64: 21.8% | 65+: 12.3%
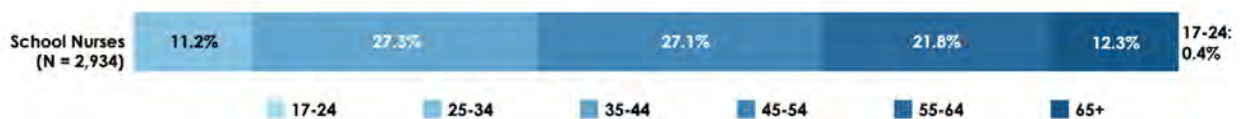
School Nurse Gender Characteristics and Race and Ethnicity Characteristics

Figure 146 School Nurses Gender and Race and Ethnicity Distribution

School Nurses (N = 2,903): Female 98.5% (n = 2,860); Male 1.5%, (n = 43)

School Nurses (N = 2,926): White 90.1% (n = 2,637); BIPOC 9.9% (n = 289)

School Nurses (N = 2,934): Not Hispanic / Latinx 98.8% (n = 2,900); Hispanic / Latinx 1.2% (n = 34)
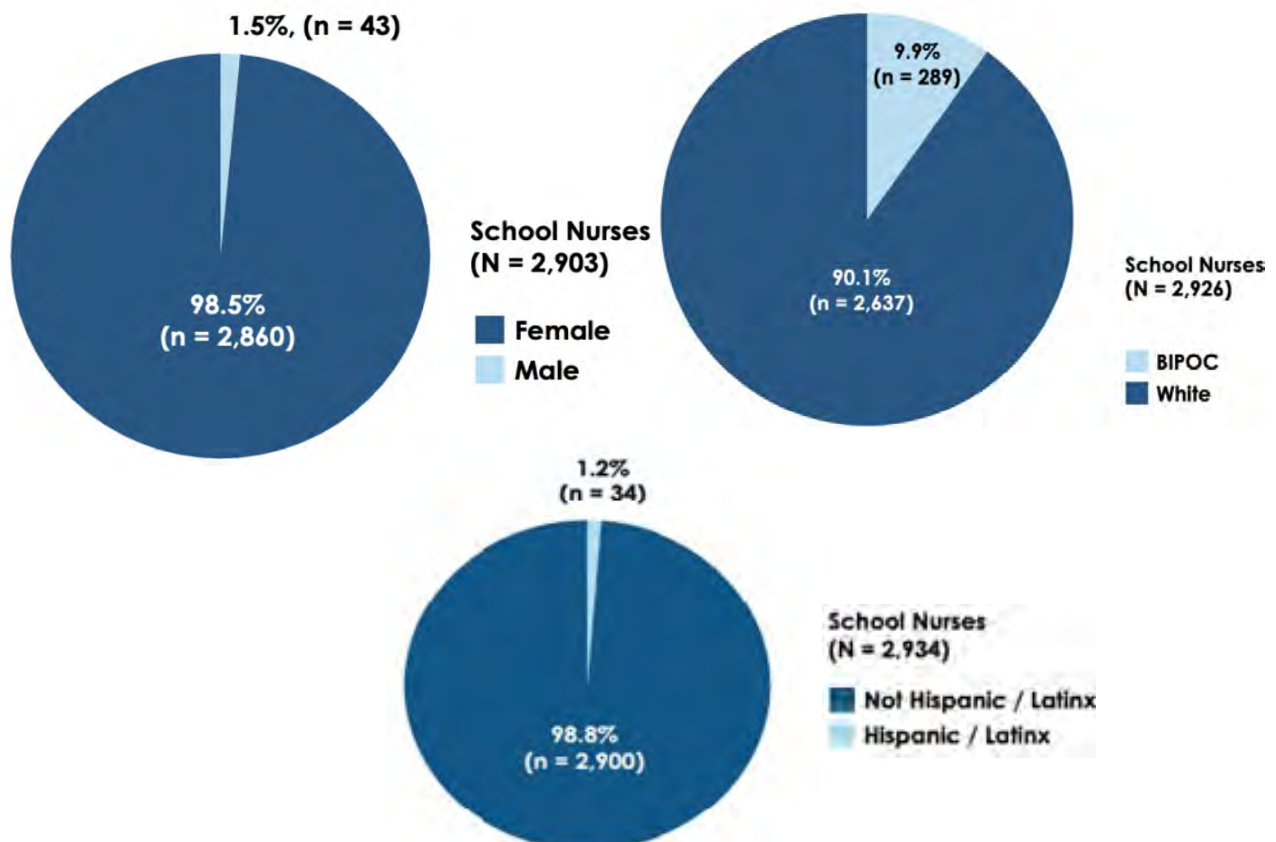
*Figure 146 does not include the school nurses who did not indicate a gender (n = 31). Figures do not include those who did not indicate their race or ethnicity.

School Nurses by Employment County and Employment Setting Characteristics

School Nurses were identified by those whose Primary or Secondary Position Employment Setting was reported as 'School Health Service' or whose Primary or Secondary Employment Specialty was 'School of Health', then of those nurses, the report reflects the school nurse population whose primary employment setting was 'School Health Service', or primary employment specialty was 'School Health,' (n = 2,934) 'School Nurses'. The total identified in the report excluded those respondents without 'School Nurse' identified as their primary position employment (n = 2,933).

Analysis of the 2023 Nursys data demonstrated that the school nursing workforce was largely made up of those 54 years and younger with most of the workforce working in the school health services. Few nurses reported other settings outside of the school of nursing and school health sciences. Most of the workforce were employed in metropolitan and micropolitan counties distributed across Missouri.

Figure 147. Percentage of School Nurses 55 Years and Older by Employment Setting
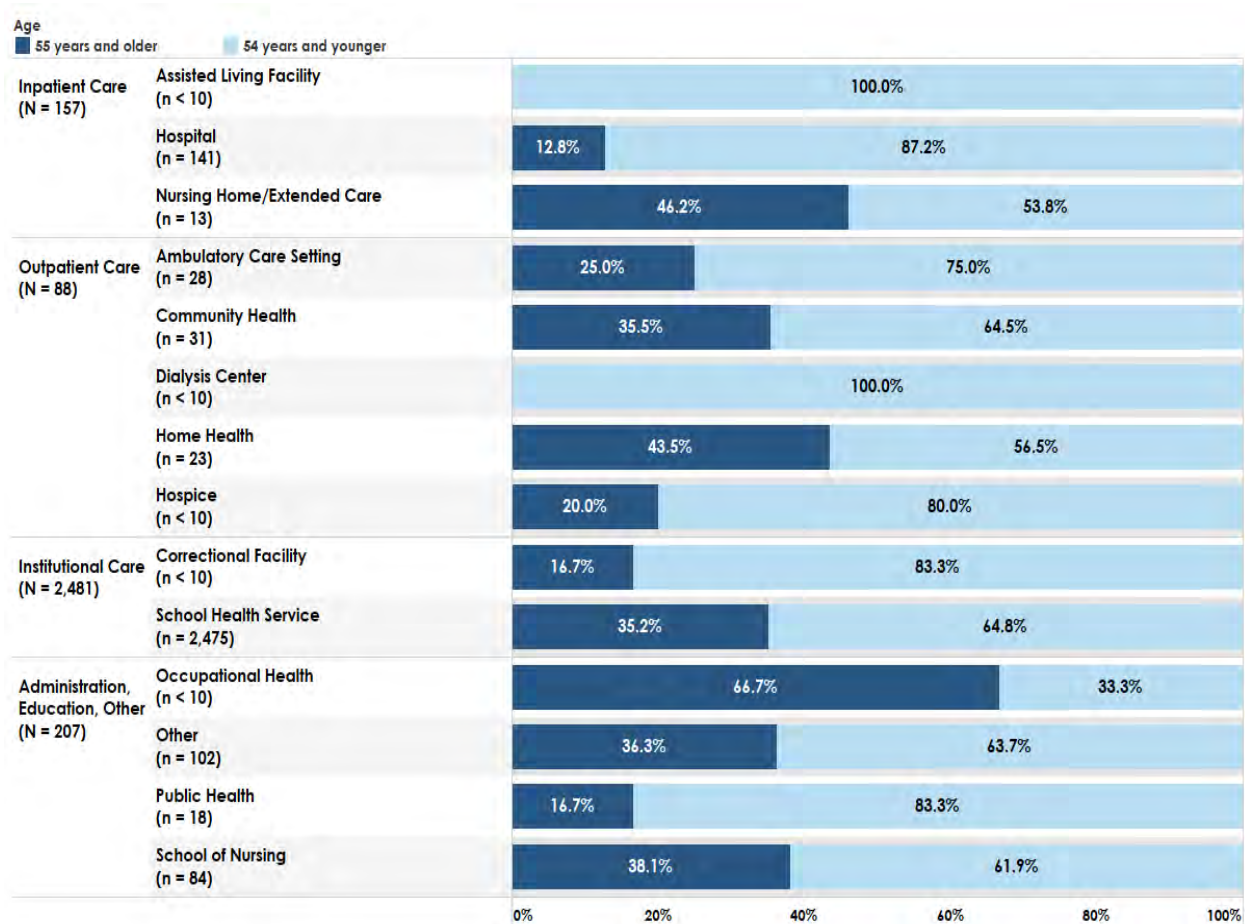
Figure 148 demonstrates that Chariton, Cooper, Holt, Knox, and Ralls have 100% of school nurses 55 years and older. However, Caldwell, Carter, Cedar, Clinton, Dade, Dekalb, Gentry, Harrison, Iron, Lewis, Mercer, Monroe, Oregon, St. Clair, Scotland, Shannon, Wayne, and Wright counties have 0%.

Figure 148. Percentage of School Nurses 55 Years and Older by County

Percent of of School Nurses 55 Years and Older
(n=898, N=2,658)

- 30% - 45%
- None
- 0% - 12%
- 46% - 49%
- 13% - 29%
- 50% - 100%
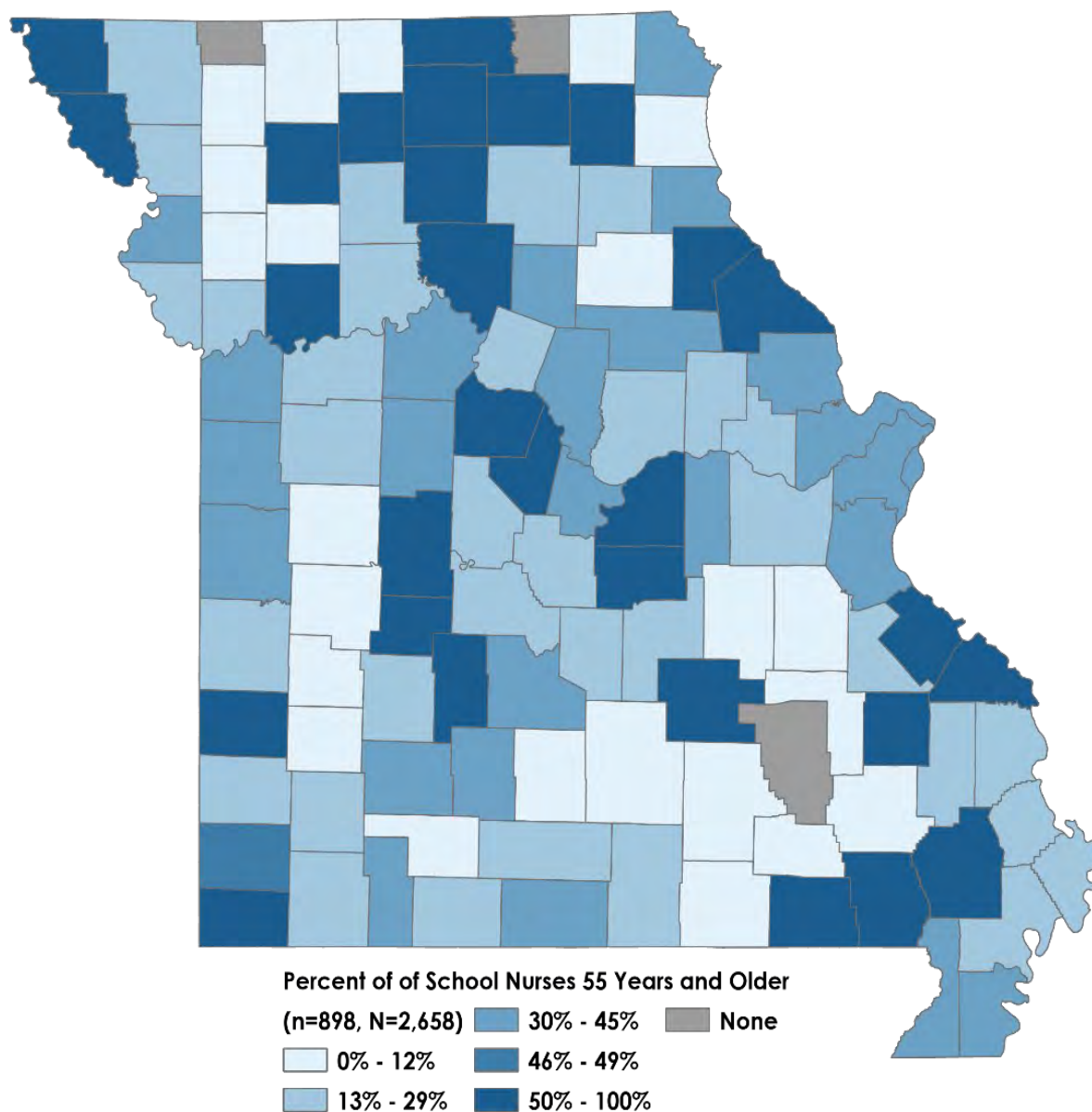
Missouri = 33.8%

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023

School Nurse Education Characteristics

The majority of the school nurses held a BSN (41%) with 6.5% earning a MSN.

Figure 149. School Nurse Education Level Starting Education and Highest Education Level

Education Level	Degree Type	
Starting Education Level (N = 1,212)	Associate Degree-Nursing (n = 313)	10.7%
	Baccalaureate Degree-Nursing (n = 454)	15.5%
	Diploma-Nursing (RN) (n = 115)	3.9%
	Doctoral Degree-Nursing (DNP) (N < 10)	0.1%
	Master's Degree-Nursing (n = 22)	0.7%
	Vocational/Practical Certificate-Nursing (n = 305)	10.4%
Highest Education Level (N = 2,933)	LPN/VN Certificate (n = 527)	18.0%
	Nursing Associates Degree (n = 632)	21.5%
	Nursing Baccalaureate Degree (n = 1,204)	41.0%
	Nursing Diploma (n = 186)	6.3%
	Nursing Doctoral Degree (DNP) (N < 10)	0.1%
	Nursing Masters Degree (n = 190)	6.5%
	Other Associates Degree (n = 35)	1.2%
	Other Baccalaureate Degree (n = 79)	2.7%
	Other Doctoral Degree (N < 10)	0.2%
	Other Masters Degree (n = 71)	2.4%

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School Nurses Employment Characteristics

Almost all the school nursing workforce was employed in educational settings in school health service, as expected for this population. However, approximately 5% work in hospitals.

Figure 150. School Nurse Employment Group by Employment Setting

5.4%
(n = 157)

7.1%
(n = 207)

3.0%
(n = 88)

84.6%
(n = 2,481)

School Nurse
(N = 2,933)

Employment Setting Group
- Inpatient
- Outpatient
- Institutional
- Administration, Education & Other
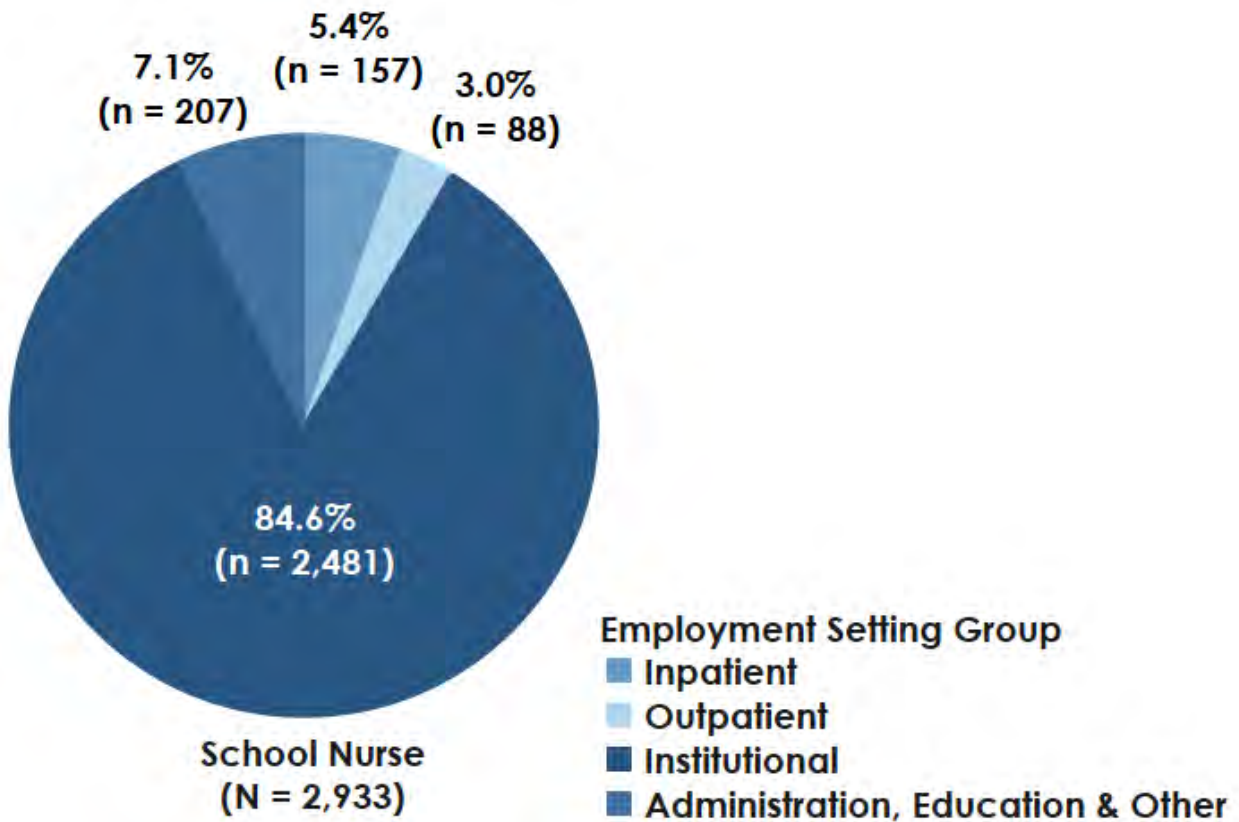
School Nurses Employment Setting

Figure 151. School Nurses Employment Settings

Employment Group	Employment Setting	
Inpatient (N = 157)	Assisted Living Facility (n < 10)	0.1%
	Hospital (n = 141)	4.8%
	Nursing Home/Extended Care (n = 13)	0.4%
Outpatient (N = 88)	Ambulatory Care Setting (n = 28)	1.0%
	Community Health (n = 31)	1.1%
	Home Health (n = 23)	0.8%
	Hospice (n < 10)	0.2%
Institutional (N = 2,481)	Correctional Facility (n < 10)	0.2%
	School Health Service (n = 2,475)	84.4%
Administration, Education, & Other (N = 207)	Occupational Health (n < 10)	0.1%
	Public Health (n = 18)	0.6%
	School of Nursing (n = 84)	2.9%
	Other (n = 102)	3.5%

0% 20% 40% 60% 80% 100%

(N = 2,934)

School Nurse Employment Specialty

Figure 152. School Nurses Employment Specialty

Specialty	Percentage
Acute care/Critical care (n = 28)	1.0%
Adult Health (n = 17)	0.6%
Anesthesia (n < 10)	0.1%
Cardiology (n < 10)	0.1%
Community (n = 45)	1.5%
Emergency/Trauma (n = 27)	0.9%
Family Health (n = 21)	0.7%
Geriatric/Gerontology (n = 15)	0.5%
Home Health (n = 15)	0.5%
Maternal - Child Health/Obstetrics (n = 26)	0.9%
Medical Surgical (n = 24)	0.8%
Neonatal (n < 10)	0.2%
Occupational health (n < 10)	0.2%
Oncology (n < 10)	0.2%
Palliative Care/Hospice (n < 10)	0.1%
Pediatrics (n = 454)	15.6%
Perioperative (n < 10)	0.2%
Psychiatric/Mental Health/Substance Abuse (n = 14)	0.5%
Public Health (n = 31)	1.1%
Rehabilitation (n < 10)	0.2%
School Health (n = 2,092)	72.0%
Women's Health (n < 10)	0.3%
Other - Clinical Specialties (n = 32)	1.1%
Other - Non Clinical Specialties (n = 13)	0.4%

(N = 2,906)

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School Nurse Employment Location by County

Figure 153 maps the percentage of school nurses per population at a rate of 10k children (0-19), as the appropriate age cohort for providing educational services by the school nursing population. Nodaway County has the highest with 38.41 per 10k and Cooper County has the lowest with 2.46 per 10k.

Figure 153. School Nurses Employment Location by County (County of Employment)

School Nurses per 10,000 Children 0-19 Years Old

(N = 2,658)   9 - 13   19 - 24   None
              2 - 8   14 - 18   25 - 38
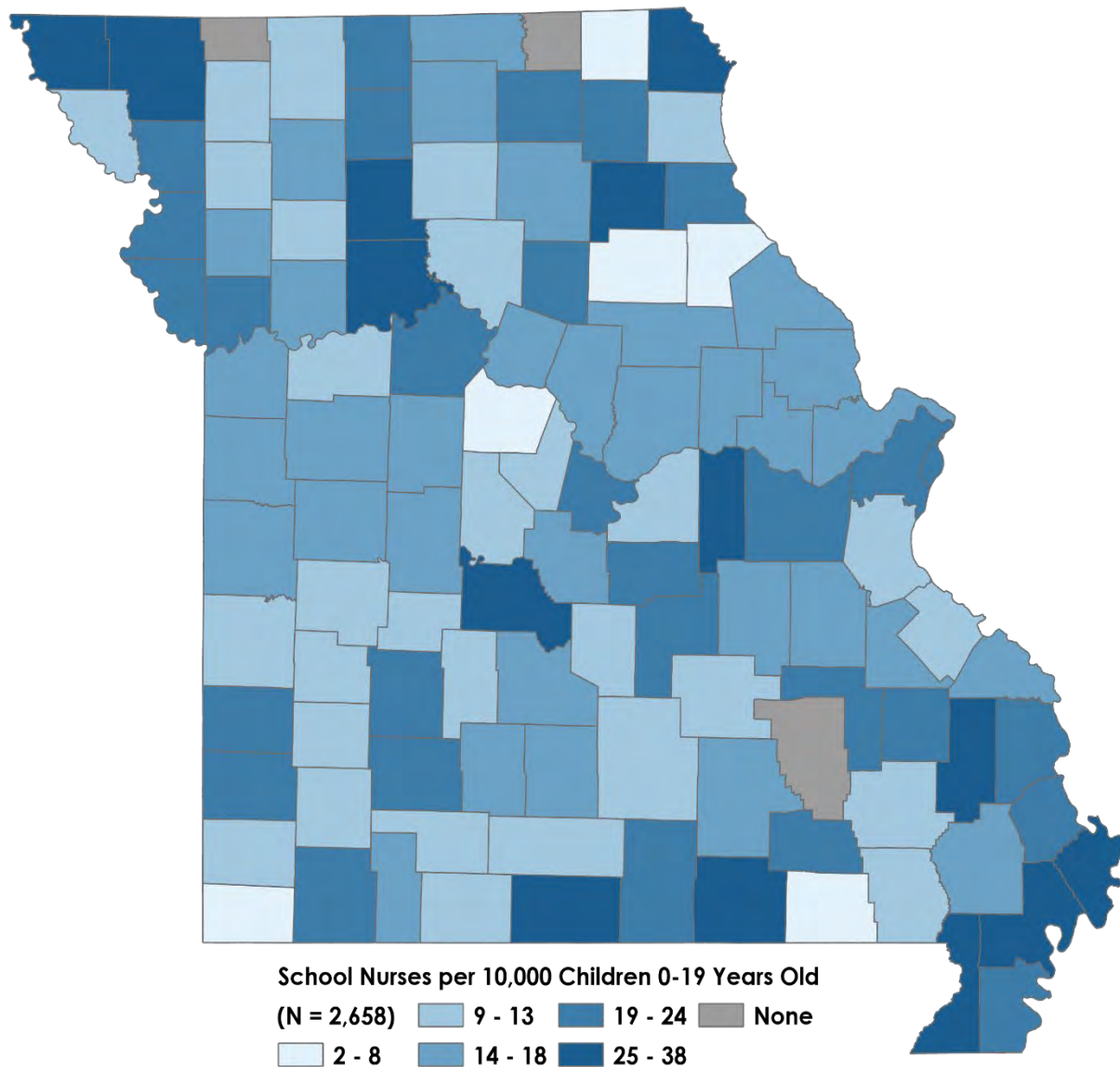
Missouri = 18 School Nurses per 10,000 Children 0-19 Years Old

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022

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Figure 154. School Nurses Employment Setting Group by Rate per 10k

School Nurse in Inpatient Setting

(N=139)

1	3 - 4
<1	2
	5 - 7
None	

Inpatient setting includes Hospital, Assisted Living Facility and Nursing Home/Extended Care

School Nurse in Outpatient Setting

(N=77)

1	3 - 4
<1	2
	5 - 6
None	

Outpatient setting includes Ambulatory Care, Home Health, Community Health, Dialysis Center, Hospice and Physician's Office/Primary Care

School Nurse in Admin, Education, Other Setting

(N=171)

2	5 - 6
<1 - 1	3 - 4
	7 - 9
None	

Admin, Education, Other Setting includes Public Health, Occupational Health, Insurance Claims/Benefits, Policy/Planning/Regulatory/Licensing Agency, School of Nursing and Other

School Nurse in Institutional Setting

(N=2,270)

10 - 14	19 - 23
2 - 9	15 - 18
	24 - 31
None	

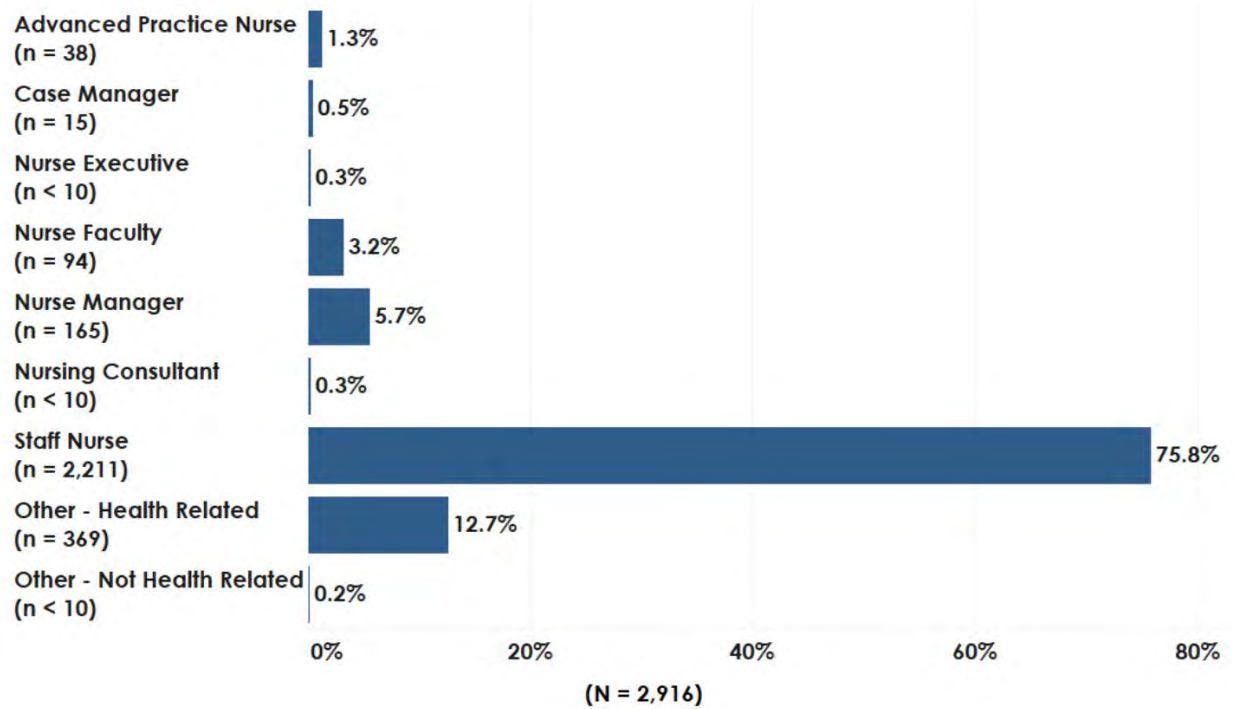Institutional Setting includes Correctional Facility and School Health Service

Created by: Center for Health Policy, University of Missouri
Source: Nursys, latest cycle 2023; US Census Population Estimates Program, 2022
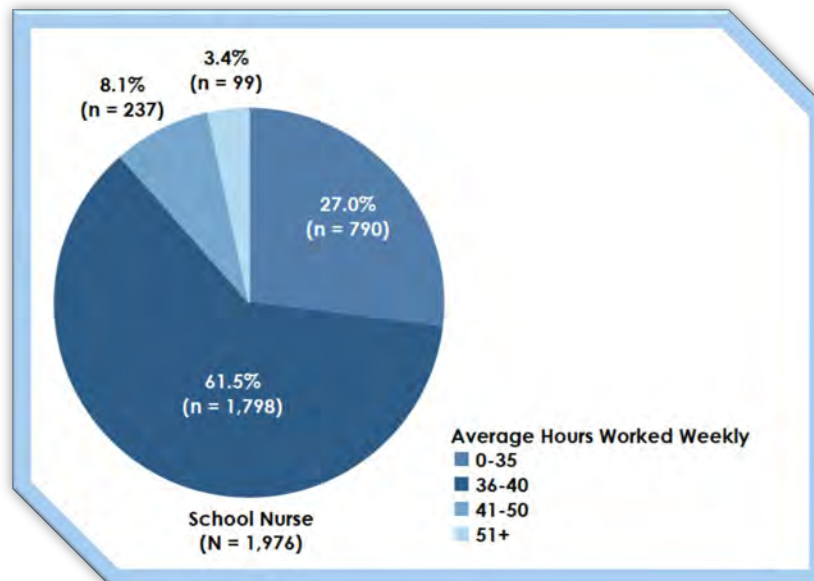
Figure 155. School Nurse Number of Positions Held

| School Nurse (N = 2,924) | 79.7% | 18.7% | 1.6% |

Legend: ■ One ■ Two ■ Three

Figure 156. Position Description of School Nurses

Position	Percentage
Advanced Practice Nurse (n = 38)	1.3%
Case Manager (n = 15)	0.5%
Nurse Executive (n < 10)	0.3%
Nurse Faculty (n = 94)	3.2%
Nurse Manager (n = 165)	5.7%
Nursing Consultant (n < 10)	0.3%
Staff Nurse (n = 2,211)	75.8%
Other - Health Related (n = 369)	12.7%
Other - Not Health Related (n < 10)	0.2%

(N = 2,916)

*Figure 156 does not include the school nurses who did not indicate their employment position (n = 18).

Figure 157. School Nurse Average Hours Working Per Week

3.4% (n = 99)
8.1% (n = 237)
27.0% (n = 790)
61.5% (n = 1,798)

School Nurse (N = 1,976)

Average Hours Worked Weekly
■ 0-35
■ 36-40
■ 41-50
■ 51+

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Conclusion – Next Steps

Additional survey data and information not previously available will be evaluated to examine additional detailed characteristics of what nurses are doing in their nursing positions. Supplementary Nursys® survey data was collected on the nurses' written responses when asked to document their 'employment specialty' or 'employment setting'. When respondents selected 'other' indicating that their employment specialty or setting was not listed, they were asked to identify (write-in) their employment characteristics. The University of Missouri will build crosswalks to triangulate data to include the data from the 'other' categories within the 'employment specialty' and 'employment setting,' to help elucidate the nursing workforce. Analyzing the written responses will increase accurate categorization when nurses write in their responses, such as when they erroneously missed the corresponding option listed and selected 'other' instead. In these situations, the nurses were counted in the 'other' category instead of one of the main listed categories. Furthermore, implementing this expanded analysis will determine the additional applicable options to incorporate into the survey.

The MSBN and the MU Center for Health Policy continue collaborations to annually report on the characteristics of the Missouri Nursing workforce and provide data-driven recommendations for stakeholders and policymakers, addressing access in health professional shortage areas, and improving recruitment and retention efforts. This collaborative partnership creates impactful relationships with established expert partners and reliable data with sound collection and analysis practices, based on empirical demonstrations of the data collected resulting in an objective and accurate view of the workforce.

Examining the Missouri 2023 nursing workforce guided a better understanding of the workforce characteristics and expanded perspectives enabling stakeholders to address workforce challenges and needs. The CHP explored the workforce data to understand the workforce characteristics and perspectives using findings to assist policymakers in legislative and administrative decisions toward better outcomes and improving the workforce.

LPNs, RNs, and APRNs are required to enroll in Nursys® e-Notify and provide workforce information when they renew their nursing license. Thus, the 2023 Missouri Nursing Workforce Report is the most comprehensive analysis of Missouri's nursing workforce. In Missouri, policymakers rely on require reliable data on nursing workforce supply and demand to make informed decisions to advance healthcare, improve Missouri's economic environment, and enhance overall quality of life. The analysis of the nursing workforce addresses questions of access to quality, affordable healthcare via data analysis on Missouri's healthcare workforce empowering stakeholders to make data-driven decisions when advocating for a robust healthcare workforce. Findings across all healthcare professions could be used to offer potential policy solutions to address current and projected gaps in care.

Depicting the characteristics of the nursing workforce presents current and projected workforce trends, policy analysis, and aggregated relevant research and data describing the aspects and services provided by the nursing workforce to address shortages, challenges, and issues the workforce experiences. Illustrating data and analysis on the nursing workforce improves the ability to address Missouri's population health needs and workforce development. The 2023 Missouri Nursing Workforce Report findings build value, understanding, and support across stakeholders –

including strategic communications and legislative, administrative, and sector-based advocacy and identifying and addressing costs and sustainability of funding, identifying roles, analytical methods, and processes for detecting and executing longitudinal and topical research. Findings translate for federal, local, and regional entities, states, boards, associations, and organizations engaging in workforce planning and expansion to improve the ability to address Missouri's population health needs and workforce development.

Data, charts, and graphics included in this report are available through the Missouri Health Care Workforce Project web application: www.MOhealthcareworkforce.org. The Nursing Workforce Indicator Dashboard ([Workforce | Missouri Health Care Workforce Project (mohealthcareworkforce.org)](http://mohealthcareworkforce.org)) demonstrates the Missouri nursing population distributed across Missouri. This can be displayed by various Missouri regions, and counties, and presented by the rate per 10k for easy comparisons between regions. Views can be enabled by individual license types or all nursing license types and by CBSAs and county searches. Nursing providers are grouped together or as a single provider group and/or select individual provider types.

Appendix 1: Survey Distribution and Response

- Note: Responses are shown by License type and are broken down by response and the response rates to each question.

The merged data set contains the match between Nursys and DPR nurses (n = 134,599) as well as unmatched DPR nurses (n = 6,446). This data set provided an overall survey response rate of **95.4%.** Out of all the licensed unique nurses in DPR (n=141,045), 134,599 answered the Nursys questions (Nursys data 134,599/141,045 = .954). The following tables demonstrate the frequency data on each question of the Nursys Workforce survey using the Nursys 2023 unique data set.

License Type	Survey Response Rate
CNM	91.5%
CNP	91.1%
CNS	97.5%
CRNA	89.3%
LPN	93.1%
RN	96.6%

Demographics

Variable 1: Gender

Gender	LPN	RN	APRN	Total
Not Responded	162 (0.7%)	1,554 (1.3%)	219 (1.7%)	1,935 (1.2%)
Responded	23,418 (99.3%)	117,619 (98.7%)	13,010 (98.3%)	154,047 (98.8%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Ethnicity: Variable 2: Are you of Hispanic or Latino origin?

Ethnicity	LPN	RN	APRN	Total
Not Responded	23,008 (97.6%)	116,292 (97.6%)	12,925 (97.7%)	152,225 (97.6%)
Responded	572 (2.4%)	2,881 (2.4%)	304 (2.3%)	3,757 (2.4%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Race: Variable 3: What is your race? (Mark all that apply)

American Indian or Alaska Native	LPN	RN	APRN	Total
Not Responded	23,206 (98.4%)	117,874 (98.9%)	13,104 (99.1%)	154,184 (98.8%)
Responded	374 (1.6%)	1,299 (1.1%)	125 (0.9%)	1,798 (1.2%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)
Asian	LPN	RN	APRN	Total
Not Responded	23,359 (99.1%)	115,332 (96.8%)	12,846 (97.1%)	151,537 (97.2%)
Responded	221 (0.9%)	3,841 (3.2%)	383 (2.9%)	4,445 (2.8%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)
Black/African American	LPN	RN	APRN	Total
Not Responded	19,746 (83.7%)	111,064 (93.2%)	12,287 (92.9%)	143,097 (91.7%)
Responded	3,834 (16.3%)	8,109 (6.8%)	942 (7.1%)	12,885 (8.3%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)
Native Hawaiian or Other Pacific Islander	LPN	RN	APRN	Total
Not Responded	23,511 (99.7%)	118,841 (99.7%)	13,208 (99.8%)	155,560 (99.7%)
Responded	69 (0.3%)	332 (0.3%)	21 (0.2%)	422 (0.3%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)
White/Caucasian	LPN	RN	APRN	Total
Not Responded	4,340 (18.4%)	13,229 (11.1%)	1,481 (11.2%)	19,050 (12.2%)

	LPN	RN	APRN	Total
Responded	19,240 (81.6%)	105,944 (88.9%)	11,748 (88.8%)	136,932 (87.8%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)
Other	**LPN**	**RN**	**APRN**	**Total**
Not Responded	23,312 (98.9%)	117,846 (98.9%)	13,087 (98.9%)	154,245 (98.9%)
Responded	268 (1.1%)	1,327 (1.1%)	142 (1.1%)	1,737 (1.1%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Year of birth: Variable 4: In what year were you born?

Year of birth	LPN	RN	APRN	Total
Responded	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Education

Entry level education: Variable 5: What type of nursing degree/credential qualified you for your first U.S. nursing license?

Entry level education	LPN	RN	APRN	Total
Not Responded	10,663 (45.2%)	52,858 (44.4%)	4,983 (37.7%)	68,504 (43.9%)
Responded	12,917 (54.8%)	66,315 (55.6%)	8,246 (62.3%)	87,478 (56.1%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Highest level of nursing education: Variable 6: What is your highest level of nursing education?

Highest level of nursing education	LPN	RN	APRN	Total
Not Responded	9 (0.0%)	135 (0.1%)	34 (0.3%)	178 (0.1%)
Responded	23,571 (100.0%)	119,038 (99.9%)	13,195 (99.7%)	155,804 (99.9%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Highest level of education in another field: Variable 7: What is your highest level of non-nursing education?

Highest level of education in another field	LPN	RN	APRN	Total
Not Responded	21,918 (93.0%)	98,988 (83.1%)	10,556 (79.8%)	131,462 (84.3%)
Responded	1,662 (7.0%)	20,185 (16.9%)	2,673 (20.2%)	24,520 (15.7%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

License/Certification Information

License type: Variable 8: What type of license do you currently hold? (Mark all that apply)

License Type	LPN	RN	APRN	Total
Responded	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Year of initial licensure: Variable 9: Year of initial U.S. licensure

Year of initial licensure	LPN	RN	APRN	Total
Not Responded	186 (0.8%)	972 (0.8%)	146 (1.1%)	1,304 (0.8%)
Responded	23,394 (99.2%)	118,201 (99.2%)	13,083 (98.9%)	154,678 (99.2%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Country of initial RN/PN licensure: Variable 10: In what country were you initially licensed RN/PN?

Country of initial licensure	LPN	RN	APRN	Total
Not Responded	180 (0.8%)	883 (0.7%)	134 (1.0%)	1,197 (0.8%)
Responded	23,400 (99.2%)	118,290 (99.3%)	13,095 (99.0%)	154,785 (99.2%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

License status: Variable 11: What is the status of your RN/PN license currently held?

Advanced Practice Registered Nurse License/Certification: Variable 12: Indicate whether you are credentialed to practice as an Active APRN as any of the following: (Select all that apply)

Certified Nurse Practitioner	LPN	RN	APRN	Total
Not Responded	23,559 (99.9%)	118,050 (99.1%)	7,796 (58.9%)	149,405 (95.8%)
Responded	21 (0.1%)	1,123 (0.9%)	5,433 (41.1%)	6,577 (4.2%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)
Clinical Nurse Specialist	LPN	RN	APRN	Total
Not Responded	23,577 (100.0%)	119,039 (99.9%)	13,035 (98.5%)	155,651 (99.8%)
Responded	3 (0.0%)	134 (0.1%)	194 (1.5%)	331 (0.2%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)
Certified Registered Nurse Anesthetist	LPN	RN	APRN	Total
Not Responded	23,579 (100.0%)	118,722 (99.6%)	12,105 (91.5%)	154,406 (99.0%)
Responded	1 (0.0%)	451 (0.4%)	1,124 (8.5%)	1,576 (1.0%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)
Certified Nurse Midwife	LPN	RN	APRN	Total
Not Responded	23,580 (100.0%)	119,137 (100.0%)	13,129 (99.2%)	155,846 (99.9%)
Responded	0 (0.0%)	36 (0.0%)	100 (0.8%)	136 (0.1%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)
Not credentialed as any above	LPN	RN	APRN	Total

Not Responded	25 (0.1%)	1,720 (1.4%)	6,779 (51.2%)	8,524 (5.5%)
Responded	23,555 (99.9%)	117,453 (98.6%)	6,450 (48.8%)	147,458 (94.5%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Employment Information

Employment status: Variable 13: What is your employment status? (Mark all that apply)

Employment status	LPN	RN	APRN	Total
Not Responded	3 (0.0%)	56 (0.0%)	13 (0.1%)	72 (0.0%)
Responded	23,577 (100.0%)	119,117 (100.0%)	13,216 (99.9%)	155,910 (100.0%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Reason for being unemployed: Variable 14: If unemployed, place indicate the reasons.

Unemployed reason	LPN	RN	APRN	Total
Not Responded	21,141 (89.7%)	110,614 (92.8%)	12,655 (95.7%)	144,410 (92.6%)
Responded	2,439 (10.3%)	8,559 (7.2%)	574 (4.3%)	11,572 (7.4%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Number of positions employed in: Variable 15: In how many positions are you currently employed as a nurse?

Number of positions employed in	LPN	RN	APRN	Total
Not Responded	5,271 (22.4%)	22,389 (18.8%)	968 (7.3%)	28,628 (18.4%)
Responded	18,309 (77.6%)	96,784 (81.2%)	12,261 (92.7%)	127,354 (81.6%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Hours worked per week: Variable 16: How many hours do you work during a typical week in all your nursing positions?

Hours worked per week	LPN	RN	APRN	Total
Not Responded	5,274 (22.4%)	22,403 (18.8%)	968 (7.3%)	28,645 (18.4%)
Responded	18,306 (77.6%)	96,770 (81.2%)	12,261 (92.7%)	127,337 (81.6%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Employer's address: Variable 17: Please indicate the state and zip code of your primary RN/PN employer.

Employer zip code	LPN	RN	APRN	Total
Not Responded	5,290 (22.4%)	22,530 (18.9%)	971 (7.3%)	28,791 (18.5%)
Responded	18,290 (77.6%)	96,643 (81.1%)	12,258 (92.7%)	127,191 (81.5%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Employment setting: Variable 18: Please identify the type of setting that most closely corresponds to your RN/PN nursing practice position.

Employment setting	LPN	RN	APRN	Total
Not Responded	5,328 (22.6%)	22,538 (18.9%)	1,013 (7.7%)	28,879 (18.5%)
Responded	18,252 (77.4%)	96,635 (81.1%)	12,216 (92.3%)	127,103 (81.5%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Employment position: Variable 19: Please identify the position title that most closely corresponds to your RN/PN nurse practice position.

Employment position	LPN	RN	APRN	Total
Not Responded	5,443 (23.1%)	23,237 (19.5%)	1,008 (7.6%)	29,688 (19.0%)
Responded	18,137 (76.9%)	95,936 (80.5%)	12,221 (92.4%)	126,294 (81.0%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Employment specialty: Variable 20: Please identify the employment specialty that most closely corresponds to your RN/PN nursing practice position.

Employment specialty	LPN	RN	APRN	Total
Not Responded	6,737 (28.6%)	27,620 (23.2%)	2,032 (15.4%)	36,389 (23.3%)
Responded	16,843 (71.4%)	91,553 (76.8%)	11,197 (84.6%)	119,593 (76.7%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Secondary employment setting: Variable 21: Please identify the type of setting that most closely corresponds to your secondary nursing practice position.

Secondary employment setting	LPN	RN	APRN	Total
Not Responded	21,299 (90.3%)	109,770 (92.1%)	10,946 (82.7%)	142,015 (91.0%)
Responded	2,281 (9.7%)	9,403 (7.9%)	2,283 (17.3%)	13,967 (9.0%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Secondary employment position: Variable 22: Please identify the position that most closely corresponds to your secondary nursing practice position.

Secondary employment position	LPN	RN	APRN	Total
Not Responded	21,294 (90.3%)	109,757 (92.1%)	10,930 (82.6%)	141,981 (91.0%)
Responded	2,286 (9.7%)	9,416 (7.9%)	2,299 (17.4%)	14,001 (9.0%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Secondary employment specialty: Variable 23: Please identify the employment specialty that most corresponds to your secondary nursing practice position.

Secondary employment specialty	LPN	RN	APRN	Total
Not Responded	21,413 (90.8%)	110,286 (92.5%)	11,139 (84.2%)	142,838 (91.6%)
Responded	2,167 (9.2%)	8,887 (7.5%)	2,090 (15.8%)	13,144 (8.4%)
Total	23,580 (100.0%)	119,173 (100.0%)	13,229 (100.0%)	155,982 (100.0%)

Appendix 2: Number and Rate of Nurses by County of Employment

Metropolitan Counties: Number and Rate per 10,000 of Nurses in Metropolitan Counties by County of Employment and Nurse Type

County of Employment	LPN		RN		APRN		All License Types	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Metro Total	**9,973**	**21.4**	**59,683**	**127.9**	**8,144**	**17.5**	**77,800**	**166.8**
Andrew	23	12.8	37	20.6	2	1.1	62	34.4
Bates	48	29.7	110	68.0	11	6.8	169	104.5
Bollinger	12	11.4	20	19.0	2	1.9	34	32.3
Boone	685	36.5	2,894	154.2	356	19.0	3,935	209.7
Buchanan	440	53.1	1,244	150.0	156	18.8	1,840	221.9
Caldwell	16	17.9	33	36.9	1	1.1	50	56.0
Callaway	74	16.5	167	37.3	16	3.6	257	57.4
Cape Girardeau	345	41.6	1,494	180.2	297	35.8	2,136	257.7
Cass	225	20.4	442	40.0	55	5.0	722	65.4
Christian	109	11.7	303	32.5	50	5.4	462	49.6
Clay	449	17.5	2,673	104.0	292	11.4	3,414	132.8
Clinton	115	53.9	204	95.6	28	13.1	347	162.7
Cole	323	42.0	1,031	134.0	129	16.8	1,483	192.7
Cooper	44	26.2	54	32.2	7	4.2	105	62.6
Dallas	24	13.6	30	17.0	4	2.3	58	32.9
DeKalb	13	11.5	10	8.8	1	0.9	24	21.2
Franklin	256	24.2	873	82.5	118	11.1	1,247	117.8
Greene	844	27.8	5,532	182.4	670	22.1	7,046	232.3
Howard	17	16.7	45	44.3	4	3.9	66	64.9
Jackson	1,424	19.9	9,599	134.0	1,663	23.2	12,686	177.0
Jasper	381	30.7	1,768	142.5	235	18.9	2,384	192.1
Jefferson	212	9.2	902	39.3	122	5.3	1,236	53.9
Lafayette	125	37.9	126	38.2	22	6.7	273	82.8
Lincoln	72	11.4	174	27.6	28	4.4	274	43.4
Moniteau	26	17.1	36	23.7	4	2.6	66	43.4
Newton	42	7.0	127	21.2	23	3.8	192	32.0
Osage	26	19.4	21	15.7	4	3.0	51	38.1
Platte	153	13.8	649	58.7	82	7.4	884	80.0
Polk	103	31.5	364	111.3	51	15.6	518	158.4
Ray	65	28.1	82	35.5	7	3.0	154	66.6
St. Charles	491	11.9	3,049	73.7	374	9.0	3,914	94.6
St. Louis	2,169	21.9	16,035	161.9	1,923	19.4	20,127	203.2
St. Louis city	535	18.7	9,391	327.7	1,383	48.3	11,309	394.6
Warren	34	9.1	63	16.9	7	1.9	104	27.9
Webster	53	13.1	101	25.0	17	4.2	171	42.4

Micropolitan Counties: Number and Rate per 10,000 of Nurses in Micropolitan Counties by County of Employment and Nurse Type

County of Employment	LPN		RN		APRN		All License Types	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Micro Total	**2,720**	**39.2**	**5,465**	**78.8**	**756**	**10.9**	**8,941**	**129.0**
Adair	150	59.6	216	85.8	27	10.7	393	156.2
Audrain	117	47.9	147	60.2	15	6.1	279	114.2
Butler	224	53.1	603	143.0	107	25.4	934	221.4
Clark	9	13.4	22	32.7	1	1.5	32	47.6
Dunklin	125	45.6	108	39.4	23	8.4	256	93.4
Howell	221	54.4	473	116.4	57	14.0	751	184.8
Johnson	141	25.9	289	53.2	25	4.6	455	83.7
Laclede	75	20.7	192	52.9	27	7.4	294	81.0
Lewis	18	18.2	29	29.3	4	4.0	51	51.6
Marion	246	86.5	409	143.8	48	16.9	703	247.2
Nodaway	90	43.5	145	70.1	15	7.3	250	120.9
Pettis	187	43.1	318	73.4	36	8.3	541	124.8
Phelps	221	48.8	524	115.6	76	16.8	821	181.2
Pulaski	126	23.4	193	35.8	32	5.9	351	65.1
Ralls	13	12.5	11	10.6	1	1.0	25	24.0
Randolph	91	37.0	169	68.6	18	7.3	278	112.9
Ripley	23	21.5	42	39.2	7	6.5	72	67.3
St. Francois	215	32.1	662	98.9	99	14.8	976	145.7
Saline	135	58.7	144	62.6	28	12.2	307	133.4
Schuyler	6	15.0	12	30.0	1	2.5	19	47.5
Scott	188	49.7	353	93.3	59	15.6	600	158.6
Taney	99	17.4	404	71.1	50	8.8	553	97.3

Rural Counties: Number and Rate per 10,000 of Nurses in Rural Counties by County of Employment and Nurse Type

County of Employment	LPN		RN		APRN		All License Types	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural Total	**2,147**	**26.2**	**3,847**	**46.9**	**3894**	**47.5**	**5,994**	**73.1**
Atchison	29	56.0	40	77.2	5	9.6	69	133.2
Barry	48	13.7	178	51.0	28	8.0	226	64.7
Barton	23	19.7	56	47.9	11	9.4	79	67.6
Benton	53	26.2	42	20.8	7	3.5	95	47.0
Camden	132	30.2	452	103.3	58	13.3	584	133.4
Carroll	50	59.4	67	79.5	4	4.7	117	138.9
Carter	12	22.8	11	20.9	3	5.7	23	43.7
Cedar	26	17.8	65	44.5	9	6.2	91	62.3
Chariton	26	35.2	13	17.6	2	2.7	39	52.8
Crawford	29	12.8	37	16.3	6	2.6	66	29.1
Dade	16	20.9	29	37.9	3	3.9	45	58.7
Daviess	12	14.2	17	20.2	2	2.4	29	34.4
Dent	52	35.9	86	59.4	10	6.9	138	95.4
Douglas	13	10.9	44	36.7	7	5.8	57	47.6
Gasconade	59	40.0	49	33.2	10	6.8	108	73.1
Gentry	15	24.0	55	88.0	2	3.2	70	111.9
Grundy	38	38.6	82	83.4	11	11.2	120	122.0
Harrison	23	28.1	67	81.7	4	4.9	90	109.8
Henry	105	46.8	220	98.0	24	10.7	325	144.8
Hickory	13	15.1	19	22.0	4	4.6	32	37.1
Holt	11	25.8	16	37.5	3	7.0	27	63.4
Iron	31	32.9	55	58.4	8	8.5	86	91.4
Knox	6	15.9	16	42.4	2	5.3	22	58.3
Lawrence	61	15.8	137	35.4	21	5.4	198	51.2
Linn	30	25.4	80	67.7	6	5.1	110	93.1
Livingston	68	47.2	183	127.1	19	13.2	251	174.3
McDonald	21	8.9	22	9.3	6	2.5	43	18.2
Macon	62	41.2	90	59.8	12	8.0	152	101.0
Madison	46	36.1	78	61.2	14	11.0	124	97.2
Maries	12	14.2	10	11.9	1	1.2	22	26.1
Mercer	14	40.7	13	37.8	0	0.0	27	78.6
Miller	56	22.0	46	18.1	7	2.8	102	40.2
Mississippi	42	35.9	45	38.5	2	1.7	87	74.4
Monroe	26	30.1	17	19.6	2	2.3	43	49.7
Montgomery	42	36.6	30	26.2	5	4.4	72	62.8

The number and Rate per 10,000 of Nurses in Rural Counties by County of Employment and Nurse Type, Continued

County of Employment	LPN		RN		APRN		All License Types	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Morgan	25	11.5	30	13.8	4	1.8	55	25.2
New Madrid	59	37.6	41	26.1	8	5.1	100	63.7
Oregon	11	12.6	20	22.9	3	3.4	31	35.5
Ozark	11	12.3	19	21.3	2	2.2	30	33.6
Pemiscot	69	46.5	63	42.4	11	7.4	132	88.9
Perry	46	24.4	139	73.7	19	10.1	185	98.1
Pike	86	48.7	96	54.3	11	6.2	182	103.0
Putnam	11	23.6	25	53.6	3	6.4	36	77.2
Reynolds	13	21.6	20	33.3	1	1.7	33	54.9
St. Clair	24	25.1	29	30.3	6	6.3	53	55.3
Ste. Genevieve	29	15.6	114	61.1	18	9.7	143	76.7
Scotland	20	43.1	38	81.8	8	17.2	58	124.9
Shannon	19	26.4	19	26.4	3	4.2	38	52.8
Shelby	17	28.4	22	36.8	4	6.7	39	65.2
Stoddard	114	40.2	145	51.1	24	8.5	259	91.3
Stone	23	7.2	30	9.3	7	2.2	53	16.5
Sullivan	32	54.8	39	66.8	5	8.6	71	121.6
Texas	67	26.4	120	47.4	14	5.5	187	73.8
Vernon	68	34.6	175	89.1	18	9.2	243	123.7
Washington	39	16.6	100	42.7	15	6.4	139	59.3
Wayne	28	25.9	26	24.1	7	6.5	54	50.0
Worth	7	35.8	5	25.6	1	5.1	12	61.4
Wright	27	14.1	65	33.9	17	8.9	92	48.0

Appendix 3: Nurse e-Notify Self-Enroll Workforce Survey Questions

Instructions for Collecting the Minimum Dataset

This document is intended to act as a guide of the dataset that is captured during the Nurse Self-Enrollment in e-Notify. This Nurse Supply Dataset is based on recommendations and guidance form Nursing Research and Nurse Workforce Forum.

Essential Elements

The e-Notify Nurse Self-Enrollment process is divided into the following categories as being the most essential data elements collected.

These categories are standard and are already being collected by a majority of states and standardizing the collection of these elements in e-Notify aligns with the goal of Workforce analysis.

- Demographics
- Education
- License Certification Information
- Employment

Variable 1: Gender
Response Categories:
Female
Male
Non-Binary / X

Variable 2: Are you of Hispanic or Latino origin?
Response Categories:
Yes
No

Variable 3: What is your race? (required. Please select all that apply)
Response Categories:
American Indian or Alaska Native
Asian
Black/African American
Native Hawaiian or Other Pacific Islander
White/Caucasian
Other (Please specify)

Variable 4: What type of nursing degree/credential qualified you for your first U.S. nursing license? (required)
Response Categories:

Vocational/Practical certificate-nursing	Master's degree-Nursing
Diploma-Nursing (RN)	Doctoral degree – Nursing Practice (DNP)
Associate degree-Nursing	Doctoral degree-Nursing (PhD)
Baccalaureate degree-Nursing	Doctoral degree-Nursing other

Variable 5: In what country did you receive your entry – level nursing education? (required)
Response Categories: Select country from dropdown

Variable 5(a): In what state is/was this nursing program located? (required)
Response Categories: Select state dropdown?

Variable 6: Please select ALL degrees/credentials you have obtained. (required, select all that apply)
Response Categories:

Vocational/Practical certificate-Nursing	Master's degree-Nursing
Diploma Nursing (RN)	Master's degree- Other field
Associate degree-Nursing	Doctoral degree-Nursing Practice (DNP)
Associate degree – Other field	Doctoral degree-Nursing (PhD)
Baccalaureate degree-Nursing	Doctoral degree-Nursing other
Baccalaureate degree- Other field	Doctoral degree – Other field

Variable 7: In what country were you initially licensed as an RN or LPN/VN?
Response Categories: Select Country from dropdown?

Variable 7(a): In what year did you obtain your initial U.S. licensure? **Response Categories**: add free text?

Variable 8: Based on the primary source license details in Nursys, you currently hold an active RN or LPN/VN license in the state(s) listed below. (please contact the states board of nursing if there are any corrections)
Do you currently hold an active Advanced Practice RN (APRN) license (credentialed as a CNP, CNM, CRNA or CNS)? (required)
Yes
No

Variable 9 (For Compact Licenses): You currently have an active RN license in the state(s) listed below or privilege to practice as an RN in the Nurse Licensure Compact (NLC) participating states listed below. Please indicate where you are currently practicing as an RN. – *This is applicable for NLC only. (optional, please select all that apply)* **Response Categories**: Select Country from dropdown?

Variable 10: Has your employment changed in the last two years? (required.)
Response Categories:
Yes
No

Variable 10(a) – If Yes:
Response Categories: (required, please select all that apply)
My Workload increased
I because a travel/agency nurse
I changed my practice setting
I started doing telehealth
I left nursing
I retired
Other (please specify)

Variable 11: What is your current employment status? (required, select apply) **Response Categories:**
Actively employed in nursing - full-time
Actively employed in nursing - part-time
Actively employed in nursing – per diem
Actively employed in a field other than nursing - Full-time
Actively employed in a field other than nursing - Part-time
Actively employed in a field other than nursing - Per-diem
Working in nursing only as a volunteer
Unemployed - Seeking work as a nurse
Unemployed - Not seeking work as a nurse
Retired

Variable 11(a): If unemployed, please indicate the reasons.
Response Categories:

Taking care of home and family	School
Disabled	Difficulty in finding a nursing position
Inadequate Salary	Other

Variable 12: How many employers are you currently working for?
Response Categories:
1 (Primary)
2 (Primary & Secondary)
3 or more

Variable 13: How many hours do you work during a typical week at all of your employers? (required).
Please enter a numeric value between 1 and 100
Response Categories: Open-ended field

Variable 14: Do you plan to retire or leave nursing in the next five years? (required)
Yes
No

Variable 15: Are you currently a travel/agency nurse? (required)
Yes
No

Variable 16: Do you provide nursing services or communicate with a patient or client located somewhere different from where you are located via phone or electronically? (required)
Yes
No

Variable 17: Please mark the response that best describes how frequently you have each feeling in relation to your role at your job.
(a): I feel emotionally drained from my work (required)
(b): I feel used up at the end of the workday (required)
(c): I feel fatigued when I get up and have to face another day on the job (required)
(d): I feel burned out from my work (required)
(e): I feel like I'm at the end of my rope (required)

Variable 18: Please indicate the state and zip code of your primary RN employer.
Response Categories: Open-ended field or drop-down menu.

Variable 19: Please estimate your pre-tax annual earnings from your primary nursing position in the most recent tax year. Include overtime and bonuses but exclude sign-on bonuses. (optional)
Response Categories: Open-ended field

Variable 20: Please estimate your pre-tax annual earnings from your primary nursing position in the most recent tax year. Include overtime and bonuses but exclude sign-on bonuses. (optional)
Response Categories: Open-ended field

Variable 21: In your primary nursing practicing position, do you spend the majority of your time providing direct patient care?
Yes
No

Variable 22: Please identify the type of setting that most closely corresponds to your RN nursing practice position.
Response Categories:
Hospital
Nursing Home/Extended Care
Assisted Living Facility
Home Health
Hospice
Correctional Facility
School of Nursing
Public Health
Dialysis Center
Community Health
School Health Service
Occupational Health
Ambulatory Care Setting
Insurance Claims/Benefits
Policy/Planning/Regulatory/Licensing Agency
Other (Please specify)

Variable 23: Please identify the position title that most closely corresponds to your RN nursing practice position.
Response Categories:

Consultant   Advanced Practice Registered Nurse
Nurse Researcher   Staff Nurse
Nurse Executive   Case Manager
Nurse Manager   Other-Health Related (Please specify)
Nurse Faculty/Educator
Other-Not Health Related (Please specify)

Variable 24: Please identify the employment specialty that most closely corresponds to your RN nursing practice position.

Response Categories:

Acute care/Critical Care

Adult Health

Family Health

Anesthesia

Cardiology

Community

Geriatric/Gerontology

Home Health

Maternal-Child Health/Obstetrics

Medical Surgical

Nephrology

Occupational health

Other-**Non-clinical specialties** (Please specify)

Oncology

Palliative Care/Hospice

Pediatrics

Neonatal

Perioperative

Public Health

Psychiatric/Mental Health/Substance Abuse

Rehabilitation

School Health

Emergency/Trauma

Women's Health

Other-**Clinical specialties** (Please specify)